

IN THE COURT OF COMMON PLEAS

COUNTY OF SUMMIT

TASER INTERNATIONAL,) CASE NO. 2006-11-7421
 INC.,) C.A. NO. 24233
)
 Plaintiff,)
)
 vs.) TRANSCRIPT OF PROCEEDINGS
) VOLUME III OF VII
 CHIEF MEDICAL EXAMINER)
 OF SUMMIT COUNTY, OHIO)
 a/k/a LISA KOHLER, M.D.)
)
 Defendant.)

* * *

BE IT REMEMBERED that upon the
 trial of the above-entitled matter in the Court
 of Common Pleas, Summit County, Ohio, before the
 HONORABLE TED SCHNEIDERMAN, Judge Presiding,
 and commencing on Monday, April 21, 2008, the
 following proceedings were had: (TRIAL)

* * *

Eric G. Smead, RPR
 Official Court Reporter
 Summit County Courthouse
 Akron, Ohio 44308

* * *

ERIC G. SMEAD, RPR

DANIEL M. HOBRIAN
 2008 JUL -8 PM 2:38
 SUMMIT COUNTY
 CLERK OF COURTS

COURT OF APPEALS
 DANIEL M. HOBRIAN
 2008 JUL -8 PM 2:43
 SUMMIT COUNTY
 CLERK OF COURTS

APPEARANCES:

JOHN R. MALEY, Attorney at Law
KATHLEEN M. ANDERSON, Attorney at Law
On behalf of the Plaintiff
TASER International.

PATRICIA RUBRIGHT, Attorney at Law
MICHAEL J. DEFIBAUGH, Attorney at Law
On behalf of City of Akron.

JOHN F. MANLEY, Assistant Prosecuting Atty.
On behalf of the Defendant.

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Steven Prough	39	67	78	--
John Ross	85	105	109	110
Vince Yurick	112	125	133	--
Mike Deihl	136	147	151 159 163	161
Willard T. Congrove	166	172	--	--
Robert Horvath	176	191	199	--
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Denise Walsh (Via CD)	228	--	--	--
Michael Evans, Ph.D.	229	261	268	278
Robert Hoffman, M.D.	282	301	313	--
Jeffrey Ho, M.D.	326	382	398	--
Lisa Kohler, M.D.	--	413 447	--	--
George Sterbenz, M.D.	--	468 494	--	--
Dorothy E. Dean, M.D.	--	522	--	--
Charles Love, M.D. (Via CD)	549	--	--	--
Mark W. Kroll, Ph.D.	551	569	579	581

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<u>PLAINTIFF'S WITNESSES:</u>	<u>DIRECT</u>	<u>CROSS</u>	<u>REDIRECT</u>	<u>RECROSS</u>
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Charles Wetli, M.D.	583	608	623	
Michael Graham, M.D.	626	643	659	
Patrick Smith (Via CD)	665	--	--	
Vincent J.M. Di Maio (Via CD)	666	--	--	

<u>DEFENDANT'S WITNESSES:</u>				
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Lisa Kohler, M.D.	690	726 727 734	--	
Dorothy Dean, M.D.	739	752	754	
George Sterbenz, M.D.	757	795 803	--	
Barbara Sampson, M.D. (Voir Dire)	808 825 (816)	841 842	--	

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1 MORNING SESSION TUESDAY, APRIL 22, 2008

2 P R O C E E D I N G S

3 - - - -

4 THE COURT: Okay. You ready for
5 your next witness?

6 MR. MALEY: We are, Your Honor.
7 Plaintiffs call Dr. Jeffrey Ho to the
8 stand.

9 THE COURT: Raise your right hand.

10 - - -

11 JEFFREY HO, M.D.

12 a witness, herein called on behalf of the
13 Plaintiff as on direct examination, being first
14 duly sworn as provided by law, was examined and
15 testified as follows:

16 THE COURT: Just have a seat
17 behind you. And for the record just state
18 your name.

19 THE WITNESS: My name is Jeffrey
20 Ho. Last name is spelled H-o.

21 DIRECT EXAMINATION

22 BY MR. MALEY:

23 Q. Good morning, Dr. Ho. How are you?

24 A. Good morning, fine.

25 Q. Good. First, could you tell the court a little

1 bit about your personal background, where you
2 live, what you do for a living.

3 A. I live in the state of Minnesota. I work as an
4 emergency physician, that's my primary full-time
5 job, also as a deputy sheriff in the state of
6 Minnesota, and an academic researcher for the
7 University of Minnesota.

8 Q. You might want to move your chair up so just to
9 be sure the judge can hear you.

10 A. Okay.

11 Q. Are you -- as a medical doctor have you done
12 scientific research on the effects of low-powered
13 TASER electronic control devices on human beings?

14 A. I have.

15 Q. And have you done that over a period of years?

16 A. I have.

17 Q. And have you done that with a number of different
18 human volunteers?

19 A. That's correct.

20 Q. Approximately how many?

21 A. Approximately five to 600. It climbs everyday
22 because we're still collecting data.

23 Q. And have you done a number of different studies
24 and experiments?

25 A. Yes, we have.

1 Q. All right. We'll talk about those a little bit
2 more. In terms of your educational background,
3 could you please highlight for the judge your
4 educational background, professional training,
5 please.

6 A. How far back would you like me to go?

7 Q. Let's start college and then professionally.

8 A. College and medical were in California at Loma
9 Linda University. Residency training was in
10 emergency medicine at Hennepin County Medical
11 Center in Minneapolis; fellowship training was
12 there also, and law officers training was also in
13 the state of Minnesota.

14 MR. MALEY: In exhibit book number
15 five that's there, and Your Honor, I will
16 find it for Your Honor. You might already
17 have it up here. Exhibit 5, tab 99.

18 THE COURT: I have it.

19 MR. MALEY: All right.

20 BY MR. MALEY:

21 Q. At Exhibit 99, exhibit book five, joint exhibits,
22 is this your declaration and your various reports
23 in this matter?

24 A. It appears to be that, yes.

25 Q. And if we were to turn back towards the end,

- 1 about the last 12, 15 pages is your CV at the end
2 of Exhibit 99?
- 3 A. That's correct.
- 4 Q. And is it an accurate CV at least as of the time
5 the reports were done in this matter?
- 6 A. It was accurate at the time the report was done,
7 yes.
- 8 Q. And where do you currently practice?
- 9 A. I practice at the Hennepin County Medical Center.
- 10 Q. And your day-to-day work at Hennepin County,
11 that's Minneapolis; is that correct?
- 12 A. That's correct.
- 13 Q. What are you engaged in on a day-to-day basis
14 there?
- 15 A. Day-to-day clinical practice is taking care of
16 patients in the emergency department.
- 17 Q. Are you licensed in that state?
- 18 A. Yes, I am, for medicine.
- 19 Q. Do you have any certifications?
- 20 A. As far as?
- 21 Q. Any in your profession?
- 22 A. Professional board certification in emergency
23 medicine.
- 24 Q. All right. What other experience do you have
25 with, for instance, military or law

1 enforcement-wise?

2 A. I have nine years in reserve military experience
3 in the Medical Corp and also law enforcement
4 experience by way of being a licensed peace
5 officer in the state.

6 Q. So you actually have served as law enforcement
7 officer?

8 A. I currently do so, yes.

9 Q. You still do?

10 A. Yes.

11 Q. As well as a board certified emergency physician?

12 A. That's correct.

13 Q. And you also have devoted substantial time in
14 your professional career to researching TASER
15 electronic control devices and their impacts on
16 humans; is that correct?

17 A. That's correct. Approximately 20 percent of my
18 protected time is devoted for research.

19 THE COURT: What time?

20 THE WITNESS: 20 percent of my
21 full-time job, Judge, is devoted towards
22 research, and so my niche of research is in
23 this area.

24 THE COURT: Are you doing the
25 research from your hospital?

1 THE WITNESS: My hospital group,
2 actually the way our hospital works is that
3 all of the physicians that are there have
4 approximately 20 to 25 percent protected
5 time, and we are directed to find a niche
6 area of research in something, and that
7 happens to be the area that I have been
8 able to choose.

9 MR. MALEY: Exhibit 99, the CV
10 portion of that, Your Honor, we move that
11 into admission?

12 MR. MANLEY: No objection.

13 THE COURT: I think that was
14 stipulated to.

15 MR. MANLEY: That's correct.

16 MR. MALEY: Thank you, Your Honor.

17 THE COURT: So it's admitted.

18 BY MR. MALEY:

19 Q. Now, Dr. Ho, let's talk about your research and
20 studies and experience with low-powered TASER
21 electronic control devices. First of all, why
22 did you choose that area in terms of you had --
23 as I understand it, professionally within your
24 organization you had various options you could
25 have chosen; is that correct?

1 A. The field is wide open to choose whatever we
2 would like to study with regard to human
3 research. The reason I chose that was that at
4 the time I was -- this was approximately four or
5 five years ago now. This is an area that was
6 unstudied and some answers needed to be found,
7 and so this was a natural area for me to move
8 into because I had dual qualification in that.

9 Q. The work that you have done with respect to
10 electronic control devices, have there been other
11 scientists and medical doctors involved in some
12 of those studies with you?

13 A. Yes, there are.

14 Q. Are they all the same institution or are they at
15 various hospitals and universities?

16 A. They're at various institutions. Some of them
17 started their training with me and have moved on
18 to other places. Some of them have always been
19 at other places, so we encompass a wide range of
20 specialists in different areas.

21 Q. And beyond the work that you have done, and we'll
22 talk about much of it this morning and try to
23 highlight for His Honor, there are other doctors
24 and scientists that have done research on the
25 effects of electronic control devices on human

1 beings?

2 A. There are, that's correct.

3 Q. And are you studied in that research and
4 literature?

5 A. I'm sorry?

6 Q. Do you keep up with the work of others in the
7 same area?

8 A. Absolutely.

9 Q. And has it been four or five years now that you
10 have been involved in doing specific research
11 experiments and study in electronic control
12 devices?

13 A. That's correct.

14 Q. Now, in terms of the work that you do in that
15 regard, is that funded by a TASER manufacturer of
16 one brand of electronic control devices?

17 A. Partial funding comes from TASER International,
18 that's correct.

19 Q. Is that unusual in terms of funding of research
20 that a manufacturer would provide that funding?

21 A. No, I would say that that was typical for most
22 area of healthcare that study things.

23 Q. Are you employed by TASER International?

24 A. I am not.

25 Q. The time that you spend, for instance, in this

1 matter testifying, doing your work with respect
2 to this case, are you compensated hourly for
3 that?

4 A. I am.

5 Q. And do you do that kind of work for others as
6 well? Have you done other consulting work?

7 A. I have done other cases, yes.

8 Q. The source of your fees for your time, does that
9 impact your opinions?

10 A. Absolutely not.

11 Q. Has anyone involved in this case suggested what
12 your opinions, findings, or conclusions should
13 be?

14 A. No.

15 Q. Now, with respect to the research that you have
16 done with respect to electronic control devices,
17 has anyone at TASER suggested what your findings,
18 conclusions, or observations should be?

19 A. Absolutely not.

20 Q. Are there -- of the various studies you have
21 done, many of them are now published; is that
22 correct?

23 A. That's correct.

24 Q. And others are still moving down that path on
25 peer review publication?

1 A. It's an ongoing process, yes.

2 Q. Are there any studies that you have done with
3 respect to electronic control devices that are
4 secret?

5 A. Secret as far as?

6 Q. In terms of they're not going to be made
7 available to the public?

8 A. No, I would say that they are not made
9 available -- some of them are not available yet
10 because they haven't been published, but at some
11 point our plan is to publish all of them. That's
12 how the academic world works.

13 THE COURT: What do you mean by
14 "that's how the academic world works"?

15 THE WITNESS: What I mean by that
16 is if I were to disclose publically my
17 research findings, I would not be able to
18 get them published because they would
19 consider that not new or novel information,
20 so many of the research findings that we
21 find in the lab, for instance, if I was to
22 discover something today, I have to hold
23 that sort of close and confidential until I
24 can actually write it up and pass it
25 through the peer review process.

1 THE COURT: But you're not
2 responding to the other part of his
3 question, that there are research projects
4 that have been reported to the manufacturer
5 but not to the public.

6 THE WITNESS: I'm not sure -- I
7 mean, we're not concealing any information.
8 Is that the question that's being asked?

9 THE COURT: You used the word
10 conceal. You're making an assumption. I'm
11 not making that assumption.

12 THE WITNESS: Okay. Ask the
13 question again.

14 THE COURT: I think we all know
15 that like pharmaceutical products that we
16 have discovered, the public has discovered
17 there has been surveys, reports, research
18 which they chose not to publish because
19 it's not favorable to the manufacturer.

20 THE WITNESS: And we have not done
21 that. All of our findings have come to
22 publication at some point. Although we
23 have some that have not because we're still
24 in the process of writing them. That's
25 what I'm trying to get across.

1 BY MR. MALEY:

2 Q. And that was my -- what I wanted to bring out,
3 Doctor. The ones that have not yet been
4 published are in the pipeline towards peer review
5 publication; is that correct?

6 A. That's correct.

7 Q. And are any of those unfavorable?

8 A. No.

9 Q. So there is not some dark secret project that you
10 were involved in that suggested that these
11 devices kill people that has not come to light
12 yet or would not come to light in the future; is
13 that correct?

14 A. No, that's correct.

15 Q. By the way, do you hold any holdings, any
16 investments, mutual funds and stocks?

17 A. I do.

18 Q. And do you have any holdings in TASER
19 International?

20 A. I do.

21 Q. Were you granted any options or particular
22 specified preferred treatment?

23 A. No, I was not.

24 Q. Did you make a decision on your own to invest in
25 some shares of TASER?

- 1 A. That's correct.
- 2 Q. And you're not employed by TASER; is that
- 3 correct?
- 4 A. That's correct.
- 5 Q. Now, the other individuals who were involved in
- 6 your research, looking at some of the reports
- 7 that we'll get out in a few moments, sometimes
- 8 there seem to be as many as five to six other
- 9 professionals involved in your research; is that
- 10 correct?
- 11 A. That's correct, that's easily correct. I think
- 12 it's upwards of that sometimes.
- 13 Q. And is that common and typical in scientific
- 14 research?
- 15 A. Very much so. We work as a team, so there is --
- 16 it's not -- it's much bigger than one person can
- 17 do alone.
- 18 Q. All right. One of those individuals who will
- 19 testify in this case is a Dr. Dawes.
- 20 A. I know Dr. Dawes.
- 21 Q. All right. Is he affiliated with your hospital?
- 22 A. He is not.
- 23 Q. Is he practicing in the state of Minnesota?
- 24 A. No, he does not.
- 25 Q. Are you related to him in any way?

1 A. No, other than friends, acquaintances.

2 Q. He actually practices in California; is that
3 correct?

4 A. That's to my knowledge, yes.

5 Q. Are there any controls that are in place that you
6 can describe to the court that protect against
7 bias in the work that you're involved in that
8 involves TASER electronic control devices?

9 A. Yeah, we actually have several. Before any
10 project is able to go forward, we must pass it
11 through at my institution what is called the
12 institutional review board and that -- it's a
13 committee of people that examine the research,
14 make sure it's ethical, make sure it meets
15 certain standards and make sure we are managing
16 any perception of conflict or anything like that
17 or bias, as you say.

18 And so in order to do that, one of the things
19 that we have done has to -- you may have noticed
20 on my work there is also Dr. James Minor, who is
21 on all of my papers. He is a statistician who is
22 a disinterested party in this. He is the holder
23 of the data and the analyzer of the data, and he
24 is sort of the overseer to satisfy those hearings
25 that we have with the institutional review board.

1 Q. Doctor, do you consider yourself an expert on
2 emergency medical care?

3 A. I do.

4 Q. And based on the research studies, experiments,
5 and publications that you have done, do you
6 consider yourself an expert on TASER electronic
7 control devices?

8 A. I do.

9 Q. Have you received exposures of those devices
10 yourself?

11 A. I have.

12 Q. Have you -- and you have published on those
13 experiments that you have done, correct?

14 A. Yes, that's correct.

15 Q. Are you familiar with the concept of excited
16 delirium?

17 A. I am.

18 Q. Have you researched that subject?

19 A. I have myself and my team has, yes.

20 Q. Do you consider yourself familiar about the
21 scientific and medical literature on excited
22 delirium?

23 A. Yes.

24 Q. Let's talk a little bit more about your research
25 on electronic control devices. First, I think

1 you have indicated that much of that research has
2 actually been on human subjects; is that correct?

3 A. That's correct.

4 Q. And are these volunteers who are recruited and
5 signed up to undergo this process?

6 A. That's correct. They are -- I mean I would like
7 to make a point: They're volunteers. They're
8 not recruited. They're volunteers.

9 Q. All right. Has there also been some research
10 that you have done that involved electronic
11 control devices involving animals?

12 A. Just recently, yes.

13 Q. And what was the circumstance of that recent
14 animal study?

15 A. The circumstance meaning?

16 Q. What was the subject of the research?

17 A. We are looking right now at doing some
18 methamphetamine trials, so basically
19 methamphetamine in combination with TASER
20 exposure.

21 Q. Is that something that because of drug laws and
22 ethics you're unable to do on human beings?

23 A. That's correct.

24 Q. So that's been done on animals?

25 A. That's correct.

1 Q. And is that work underway?

2 A. It is.

3 Q. And have there been any preliminary findings and
4 conclusions that have come out of your work?

5 MR. MANLEY: Objection,
6 preliminary findings and conclusions.

7 THE COURT: Had you --

8 MR. MANLEY: I'm objecting.

9 THE COURT: For what reason?

10 MR. MANLEY: He has been asking if
11 there is any preliminary findings.

12 THE COURT: I heard that.

13 MR. MANLEY: He has not provided
14 us with any preliminary finding of any
15 studies with regard to --

16 THE COURT: Is this the report
17 itself?

18 MR. MANLEY: I don't believe so.

19 THE WITNESS: Judge, I think if I
20 could --

21 THE COURT: I'm not asking you.

22 THE WITNESS: Okay.

23 THE COURT: Sorry. Is it in the
24 report?

25 MR. MALEY: Your Honor, these are

1 new studies that he is involved in
2 presently. I'm asking if there are any
3 preliminary findings.

4 THE COURT: I think he said yes.
5 Did you say yes to that or haven't you
6 answer that?

7 THE WITNESS: That's correct, Your
8 Honor.

9 THE COURT: Yes, I will let that
10 stand. Sustained.

11 MR. MALEY: Thank you, Judge.

12 THE COURT: Are you going to ask
13 another question about it?

14 MR. MALEY: I certainly will, and
15 I have a number of questions about a lot of
16 the studies that you have done.

17 THE COURT: The question is, I
18 think in part, that's not within the
19 confines of the report that you gave Mr.
20 Manley. I think that's apparently true.

21 MR. MALEY: That's correct. If I
22 may preliminarily, Your Honor.

23 BY MR. MALEY:

24 Q. These studies are ongoing presently; is that
25 correct?

1 A. That's correct.

2 Q. And when you were first retained with respect to
3 the Mr. Holcomb matter, were those studies
4 underway?

5 A. These particular studies we are talking about?

6 Q. Yes.

7 A. It was not underway at that time, no.

8 THE COURT: I think in fairness
9 to, Mr. Manley, I'm going to sustain the
10 objection. I guess there comes -- if I'm
11 hearing you right, it comes as a surprise
12 to you?

13 MR. MANLEY: It does.

14 MR. MALEY: That's fine, Your
15 Honor.

16 BY MR. MALEY:

17 Q. In terms of the study that you have been involved
18 in, Dr. Ho, are there more than 15 studies you
19 have been involved in with humans?

20 A. Yes.

21 Q. And I think you indicated more than 500 human
22 subjects?

23 A. Something to that effect, yes.

24 Q. Are you aware of any other scientists or medical
25 professional who has been involved in the extent

1 of human studies that you have with respect to
2 electronic control devices?

3 A. I'm aware of other researchers of human studies
4 but probably not to the number of human people
5 that have gone through -- or folks that have gone
6 through their volunteer trials, no.

7 Q. And you have devoted -- have you devoted hundreds
8 of hours to these efforts?

9 A. Easily.

10 Q. It's part of your ongoing practice?

11 A. Yes, it is.

12 Q. And is your law enforcement background one of the
13 reasons you're interested in the subject?

14 A. I would say that's correct.

15 Q. Of the various tests that you have done and
16 experiments, did any human beings die in any of
17 those?

18 A. No, absolutely not.

19 Q. Were any of the humans ever in cardiac arrest?

20 A. No.

21 Q. Were any in pulmonary deficit?

22 A. No.

23 Q. From your experience as an emergency room medical
24 doctor, board certified, were any at risk of
25 death?

1 A. No, otherwise we would not have undertaken those.

2 Q. What I would like to do now, Dr. Ho, is highlight
3 for the court some of those studies, and these
4 would be at the binder behind to your right --

5 MR. MALEY: Your Honor, I'm going
6 to hand you what is a binder called
7 Plaintiff's Previously Disclosed Exhibits
8 that we will be walking through several of
9 these. These are not yet admitted, but
10 they were disclosed and provided to
11 Plaintiff's counsel.

12 BY MR. MALEY:

13 Q. If you could first direct your attention to
14 Exhibit 168.

15 A. Okay.

16 MR. MANLEY: 168?

17 MR. MALEY: 168, do you have that?

18 MR. MANLEY: I don't.

19 MR. MALEY: Here.

20 MR. MANLEY: Thank you.

21 BY MR. MALEY:

22 Q. What I want to do initially, Doctor, is just
23 catalog and highlight what some of these address.

24 168, is this a human study that you were
25 involved in involving humans?

- 1 A. That's correct.
- 2 Q. Addressing the cardiovascular and physiological
3 effects of conducted electric weapon discharge in
4 resting adults?
- 5 A. Yes.
- 6 Q. Did you undertake the scientific method in doing
7 this study?
- 8 A. Yes, we did.
- 9 Q. And what was basic conclusion -- well, step back.
10 What was the basic experiment that you
11 undertook here?
- 12 A. The paper that you are referencing was our
13 first -- this was our first trial, and so what we
14 wanted to do with this was simply to take human
15 volunteers and expose them to a TASER and find
16 out what effect that has.
- 17 We were not trying to look at any factor. We
18 just wanted to simply see what effect was the
19 TASER having on people from a physiologic and
20 cardiovascular standpoint.
- 21 Q. And what were the -- there were human subjects
22 involved?
- 23 A. Yes, that's correct.
- 24 Q. And did they receive exposures to electronic
25 control devices?

1 A. They did.

2 Q. At what sort of tools did you use to measure
3 physiologic effect, cardiac effects?

4 A. We used blood serum analysis of biomarkers, so
5 standard things that we use in medicine to
6 evaluate physiology. We also used EKG machines
7 to look at both rhythm strips and 12-lead EKGs
8 which tell us the electrical rhythm of the heart
9 and also things like vital signs.

10 Q. In the conclusions it states in part that the
11 TASER X26 "did not affect the recordable cardiac
12 and electrical activity within a 24-hour period
13 following a standard five-second application."

14 Is that a conclusion you reached along with
15 your colleagues?

16 A. That's correct. We followed these folks for 24
17 hours after their exposure to ensure that no
18 delayed issues came up.

19 Q. Were you able to detect any induced electrical
20 dysrhythmias?

21 A. We were not.

22 Q. Or significant direct cardiac cellulose damage?

23 A. We were not.

24 MR. MALEY: Move to admit Exhibit
25 168.

1 MR. MANLEY: We would object, Your
2 Honor. It's just an article, a scientific
3 article that this man has authored and
4 suggests to the court that, you know, given
5 the unique profiles of the three
6 individuals here, it's of limited probative
7 value.

8 THE COURT: Are we still talking
9 about this?

10 MR. MANLEY: 168.

11 THE COURT: 168.

12 MR. MALEY: Yes, Your Honor.

13 THE COURT: I will allow it in.

14 I'm not sure why I shouldn't.

15 MR. MALEY: Thank you, Your Honor.

16 BY MR. MALEY:

17 Q. Next, Dr. Ho, I will direct your attention to
18 Exhibit 182 in the same binder.

19 THE COURT: 172?

20 MR. MALEY: 182, 182.

21 THE WITNESS: Okay.

22 BY MR. MALEY:

23 Q. And is this another publication of a study that
24 you were a contributor to?

25 A. Yes, that's correct.

1 Q. And did this involve some additional individuals
2 or different individuals who were involved in the
3 first study?

4 A. Yes, it did.

5 Q. And did you undertake the scientific method in
6 analyzing, studying the respiratory effect of
7 prolonged electrical weapon application on human
8 volunteers?

9 A. Yes, we did.

10 Q. Did this involve a longer exposure than the first
11 experiment that you were involved in?

12 A. Yes, it was three times as long as the first.

13 Q. And it was a 15-second exposure?

14 A. That's correct.

15 Q. And the methods that you employed, again, this
16 was on human volunteers, correct?

17 A. Yes, it was.

18 Q. And in terms of conclusions, it states the last
19 page: We were unable to detect any respiratory
20 impairment during either prolonged continuous or
21 prolonged intermittent conducted electrical
22 weapon exposure in this study population.

23 Now, how did you monitor that?

24 A. What we utilized on this was a formfitting mask
25 attached to a breath analyzation machine, so it

1 measures breath-by-breath analysis of everything
2 that the subject inspires and expires, and there
3 is nothing that's left to go out to the
4 environment.

5 Q. Is that equipment that you used in other
6 experiments to measure pulmonary function?

7 A. Yes, it is.

8 Q. Accepted tool?

9 A. Very much so.

10 Q. And this work was then summarized in this
11 publication, correct?

12 A. That is correct.

13 MR. MALEY: Move to admit Exhibit
14 182.

15 MR. MANLEY: No objection.

16 THE COURT: It's admitted.

17 MR. MALEY: Thank you, Your Honor.

18 BY MR. MALEY:

19 Q. I would direct your attention next -- by the way,
20 Dr. Ho, this was a 15-minute exposure.

21 Have you also done research with longer
22 exposures in measuring physiological effects?

23 A. Sorry, this is 15 seconds.

24 Q. Sorry, 15 seconds.

25 A. 15 seconds. And we have done longer than 15

1 seconds, yes.

2 Q. And what's the longest that you have studied on a
3 continuous exposure to a human volunteer?

4 A. We have some exposures up to 45 seconds.

5 Q. And those -- those 45 seconds continuously?

6 A. Yes.

7 Q. With the -- when you do these experiments do you
8 have the probes on the chest?

9 A. We have them in various areas but on the chest
10 for some of them.

11 Q. For the court's understanding I take it that you
12 don't fire the probe, you attach it for the
13 experiments?

14 A. We have done it both ways.

15 Q. Oh, you have. All right. And the 45-second
16 exposure, was there physiologic equipment
17 connected to the subjects to measure their
18 performance?

19 A. Yes, there was.

20 Q. And did you detect any -- as in the 15-second
21 exposure, were there any respiratory problems
22 under the 45-second exposure?

23 A. No. In fact we find enhanced respiration during
24 these exposures.

25 Q. You have experienced the device yourself,

- 1 correct?
- 2 A. That's correct.
- 3 Q. You have personally observed hundreds of
- 4 volunteer subjects undergo exposures, correct?
- 5 A. That's correct.
- 6 Q. And from your experience in doing those tests, do
- 7 humans continue to respirate and breathe during
- 8 TASER electronic control device exposures?
- 9 A. Yes, they do. In every case that's what we have
- 10 found.
- 11 Q. 167 is the next item. This is a study that was
- 12 done?
- 13 A. Hang on. This is another study that was done.
- 14 Q. All right. And this also involved a number of
- 15 different researchers with you?
- 16 A. That's correct.
- 17 Q. And were there any adverse effects on the humans
- 18 that you studied in this report Exhibit 167?
- 19 A. The only adverse effect that we could find was
- 20 from the alcohol that was administered in this
- 21 study.
- 22 Q. All right. And so in this study volunteers
- 23 consumed alcohol --
- 24 A. That is correct.
- 25 Q. -- to test the effects, the interaction of the

1 device with intoxication?

2 A. That's correct.

3 Q. And they continued to breathe?

4 A. They did.

5 Q. And their heart function continued?

6 A. They did.

7 MR. MALEY: Move to admit Exhibit
8 167.

9 MR. MANLEY: No objection.

10 THE COURT: So admitted. All
11 three reports you have had an opportunity
12 to examine and study?

13 MR. MANLEY: Yes.

14 THE COURT: Of course the court
15 has.

16 BY MR. MALEY:

17 Q. Direct your attention to Exhibit 181.

18 A. Okay.

19 Q. Did this involve 44 volunteers?

20 A. Yes, it did.

21 Q. And could you describe just generally for the
22 court what the purpose of this particular study
23 was?

24 A. Well, if you remember, the first study that we
25 talked about was simply to find out what happens

1 with exposure to humans at rest. This study
2 particularly was looking at the dynamics of
3 exhaustion, and so what we wanted to find out is
4 if we exerted persons and then exposed them to a
5 prolonged TASER application, this was 15 seconds,
6 also, was there something in combination there
7 that we would find?

8 Q. And so you had the subjects physically work?

9 A. Yes.

10 Q. All right. Was it on a treadmill?

11 A. It was a series of anaerobic exercises which also
12 included a sprint on the treadmill.

13 Q. And what -- you had various co-researchers
14 involved in this project; is that correct?

15 A. Yes, that's correct.

16 Q. And what were your conclusions with respect to
17 this study?

18 A. Our conclusions were that once we were able to
19 get them exhausted, and we would check their
20 physiologic state at that point; application of
21 TASER for 15 seconds did not change that
22 condition any further.

23 MR. MALEY: Move to admit Exhibit

24 181.

25 MR. MANLEY: No objection.

1 THE COURT: All right. It's
2 admitted.

3 BY MR. MALEY:

4 Q. I direct your attention to Exhibit 190, 190. Was
5 this a presentation publication that you had
6 co-authored, made regarding electronic control
7 devices?

8 A. That's correct.

9 Q. And is this more of an overview of the device and
10 various scientific and medical aspects of it?

11 A. That's correct.

12 Q. And did you present this at a conference?

13 A. Yes, that's correct.

14 Q. In Germany?

15 A. Yes.

16 Q. Have you presented at various conferences around
17 the -- first around United States on electronic
18 control devices?

19 A. Yes.

20 Q. Have you done so internationally?

21 A. Yes.

22 Q. Would these be other physicians and scientists
23 for instance?

24 A. They are also to -- well, other physicians and
25 scientists, also to the military and police

1 agencies and basically anybody who is interested.

2 MR. MALEY: Move to admit Exhibit

3 190.

4 MR. MANLEY: No objection.

5 THE COURT: Admitted.

6 BY MR. MALEY:

7 Q. By the way, Doctor, as we get through this list,
8 I'll try to keep moving quickly, we are going to
9 talk about your opinions in this particular case.

10 The findings and conclusions that you offer
11 in this case based in part upon these studies
12 that you have done on humans?

13 A. Yes, they are.

14 Q. I direct your attention to Exhibit 163. Was this
15 a -- this is entitled absence of
16 Electrocardiograph Change Following Prolonged
17 Application of a Conducted Electrical Weapon in
18 Physically Exhausted Adults.

19 Is this a different study than the one we
20 talked about before?

21 A. This is a subset of that same study.

22 Q. All right. And these were 25 volunteers?

23 A. That's correct.

24 Q. And you talk about electrocardiograph change. Is
25 that the type of -- is that EKG?

1 A. That is correct.

2 Q. So these subjects were wired up with EKGs,
3 exercised anaerobically, and then received an
4 exposure of the electronic control device?

5 A. That's correct.

6 Q. And how many seconds were they exposed?

7 A. 15 seconds.

8 Q. And were there any electrocardiograph changes of
9 significance that you found from this experiment?

10 A. There were none.

11 MR. MALEY: Move to admit Exhibit
12 163.

13 MR. MANLEY: No objection.

14 THE COURT: It is admitted.

15 BY MR. MALEY:

16 Q. I direct your attention to Exhibit 183, 183.

17 A. Okay.

18 Q. This is entitled Breathing Parameters, Venous
19 Blood Gases, and Serum Chemistries With Exposure
20 to a New Wireless Projectile Conducted Weapon in
21 Human Volunteers. This dealt with breathing?

22 A. It did deal with breathing, yes.

23 Q. Venous blood gas, could you explain to the court
24 what that means?

25 A. That is blood tests where we check certain

1 parameters of blood drawn from a vein to ensure
2 what the Ph status is of the person that we are
3 examining, and Ph is just a measure of acid in
4 the blood basically.

5 Q. All the research we have talked about so far was
6 done with the approval of the Hennepin County
7 Department of Emergency Medicine at your medical
8 center; is that correct?

9 A. I'm sorry, it's been with the approval of?

10 Q. Of your employer?

11 A. Yes, that's correct.

12 Q. And what were the summary -- the results that you
13 found for this experiment shown in Exhibit 183?

14 A. We did not find any significant changes, nothing
15 that would be clinically concerning.

16 MR. MALEY: Move to admit Exhibit
17 183.

18 MR. MANLEY: No objection.

19 THE COURT: Admitted.

20 BY MR. MALEY:

21 Q. Direct your attention to Exhibit 184 entitled
22 15-Second Conducted Electrical Weapon Application
23 Does Not Impair Basic Respiratory Parameters
24 Venous Blood Gases Or Blood Chemistries as --

25 MR. MANLEY: 184?

1 Q. 184. By the way at the bottom on this one there
2 is a picture that shows a human volunteer; is
3 that correct?

4 A. That's correct.

5 Q. Does that show EKG leads attached to the human's
6 chest?

7 A. That is correct.

8 Q. And the blue item on the face, is that the
9 breathing apparatus?

10 A. That is correct. That is the mask that they wear
11 during the exposure.

12 Q. And then there on the right arm is there
13 something to detect venous blood gases?

14 A. The white portion of the elbow, that --

15 Q. Yes.

16 A. -- that is actually an area where we have drawn
17 blood from. I believe that is a bandage.

18 Q. All right. And this study, did it find any
19 detrimental impact from the 15-second exposure?

20 A. It did not.

21 MR. MALEY: Move to admit Exhibit
22 184.

23 MR. MANLEY: No objection.

24 THE COURT: Admitted.

25 BY MR. MALEY:

1 Q. Now, Exhibit 185 is entitled 15-Second Conducted
2 Electrical Weapon Exposure Does Not Cause Core
3 Temperature Elevation in Non-Environmentally
4 Stressed Resting Adults.

5 The attempt of this study was to determine
6 core temperature, is that correct, in a human?

7 A. It was to determine core temperature and also the
8 effect the TASER would have on that temperature.

9 Q. And were there human subjects?

10 A. Yes.

11 Q. 21?

12 A. Yes.

13 Q. Was the scientific method employed?

14 A. Yes, it was.

15 Q. Was there any material increase that you found
16 from this study in the core body temperature from
17 electronic control device exposure?

18 A. There was not.

19 MR. MALEY: Move to admit Exhibit

20 185.

21 MR. MANLEY: No objection.

22 THE COURT: Admitted.

23 BY MR. MALEY:

24 Q. Now, Exhibit 186, another 15-second application,
25 it's titled Conducted Electrical Weapon

1 Application Does Not Impair Basic Respiratory
2 Parameters, Venous Blood Gases or Blood
3 Chemistries and Does Not Increase Core Body
4 Temperature. This describes the prior study,
5 correct?

6 A. It encompasses a portion of the prior study, yes.

7 Q. It expands on that protocol; is that correct?

8 A. That's correct.

9 Q. Did they involve 18 subjects?

10 A. It did.

11 Q. Was the scientific method employed?

12 A. Yes, it was.

13 Q. Were there any material adverse impacts that you
14 found physiologically from this study on the
15 human subjects?

16 A. There were none.

17 MR. MALEY: Move to admit Exhibit

18 186.

19 MR. MANLEY: No objection.

20 THE COURT: Admitted.

21 BY MR. MALEY:

22 Q. I direct your attention to Exhibit 187 entitled
23 the neuro -- could you pronounce that?

24 A. Neuroendocrine.

25 Q. Effects of the TASER X26 Conducted Electrical

1 Weapon as Compared to Oleoresin Capsicum.

2 A. Close, Oleoresin Capsicum.

3 Q. Is that O.C. spray?

4 A. That's correct.

5 Q. Is that the same as pepper spray?

6 A. That's correct.

7 Q. So the technical name is the long name. That's
8 also called O.C. spray, but many of us know it as
9 pepper spray?

10 A. That's correct.

11 Q. What was the purpose of the Exhibit 187 study
12 that you engaged in with human volunteers?

13 A. The purpose of this was to examine markers of
14 stress that humans can give off during different
15 stimuli, and the TASER was one of those, and so
16 that's -- we basically wanted to check what those
17 markers did during TASER exposure.

18 Q. And what were the summary or the conclusions that
19 you reached?

20 A. The collusions were that while you do get a
21 slight raise in neuroendocrine markers from the
22 TASER exposure, there are other things that
23 actually make those markers go up quite a bit
24 more and stay up for longer.

25 Q. Such as O.C. spray?

1 A. O.C. spray is one. We also check with grappling,
2 so hand-to-hand combat on the ground, that type
3 thing.

4 Q. So you compared a TASER exposure to another law
5 enforcement restraint and found the TASER had
6 less physiologic impacts from this study,
7 correct?

8 A. That's correct.

9 Q. You compared it also to physical activity?

10 A. Physical -- physical restraint is actually what
11 we were looking at.

12 Q. And you found -- did you find that the TASER had
13 less impact than the physical restraint?

14 A. Yes, that's correct.

15 MR. MALEY: Move to admit Exhibit
16 187.

17 MR. MANLEY: No objection.

18 THE COURT: Admitted.

19 BY MR. MALEY:

20 Q. I direct your attention to Exhibit 161 entitled
21 Ultrasound Measurement of Cardiac Activity During
22 Conducted Electrical Weapon Application in
23 Exercising Adults.

24 A. Okay.

25 Q. Could you describe -- this had 37 subjects; is

- 1 that correct?
- 2 A. That's correct.
- 3 Q. All human?
- 4 A. That's correct.
- 5 Q. All right. And 15-second application of a
- 6 electronic control device?
- 7 A. That's correct.
- 8 Q. What was -- how was the ultrasound tool used in
- 9 this experiment?
- 10 A. Well, the ultrasound is a method for us to
- 11 actually use realtime visualization of what the
- 12 heart is doing. So as we have these people who
- 13 have exercised to exhaustion and then we apply a
- 14 TASER to them for 15 seconds, we are able to
- 15 watch what the heart does in realtime during that
- 16 15-second application.
- 17 Q. So you're -- while they're receiving exposure,
- 18 your research group was watching the heart on
- 19 ultrasound?
- 20 A. That's correct.
- 21 Q. And what were the results that you found from
- 22 this human research study?
- 23 A. We were able to, during all of these, watch what
- 24 the heart was doing. We did not see any
- 25 concerning heart rhythm abnormalities.

1 MR. MALEY: Move to admit Exhibit

2 161.

3 MR. MANLEY: No objection.

4 THE COURT: Admitted.

5 BY MR. MALEY:

6 Q. I direct your attention to Exhibit 173, 173,

7 Doctor --

8 A. Okay.

9 Q. -- entitled Prolonged TASER "Drive Stun" Exposure
10 in Humans Does Not Cause Worrisome Biomarker
11 Changes. This involved how many subjects --
12 human subjects?

13 A. 21.

14 Q. And in this subject they were exposed to drive
15 stuns; is that correct?

16 A. That's correct.

17 Q. Now, you have reviewed materials in, for
18 instance, the Mark McCullaugh case that is part
19 of the subject of this lawsuit; is that correct?

20 A. That's correct.

21 Q. Is it your understanding that drive stuns were
22 applied to Mr. McCullaugh as opposed to probes
23 shooting through the wire?

24 A. That's correct.

25 Q. And what was the length of the exposures from

1 drive stuns that were applied by your group in
2 this experiment?

3 A. I believe these were 10-second exposures.

4 Q. Were there any worrisome changes that you found
5 in the serum biomarkers?

6 MR. MANLEY: Objection.

7 Worrisome, I don't know what that means.

8 THE COURT: I mean is it something
9 in the language of the report?

10 MR. MALEY: Yes, it is, Your
11 Honor. I'm just trying expedite it. I can
12 ask a different way if I you -- I will
13 withdraw the question.

14 BY MS. MALEY:

15 Q. Did you find any material of adverse impacts from
16 this study on the drive stuns on human subjects?

17 THE WITNESS: I can answer that?

18 THE COURT: Sure.

19 A. We did not.

20 Q. I direct your attention --

21 MR. MALEY: Move to admit Exhibit
22 173.

23 MR. MANLEY: No objection.

24 THE COURT: Admitted.

25 BY MR. MALEY:

1 Q. Direct your attention to Exhibit 150 in the same
2 binder.

3 THE COURT: You're going to figure
4 out these pages going back and forth, back
5 and forth?

6 MR. MALEY: Last one, Your Honor,
7 Exhibit 150.

8 THE WITNESS: Okay.

9 BY MR. MALEY:

10 Q. All right. Exhibit 150, is it something that you
11 contributed to --

12 A. Yes.

13 Q. -- along with other medical doctors?

14 A. That is correct.

15 Q. All right. And it's entitled Confirmation of
16 Respiration during Trapezial Conducted Electrical
17 Weapon Application. What was -- how was this
18 study done?

19 A. This is a case report. It's not a particular
20 study, but what this was was we have had many
21 folks call us or write us and say, "Hey, we would
22 like to look at this" or "we think that this is a
23 certain theory that should be looked at."

24 This was one of those where one of the areas
25 that is taught to provide a drive stun is the

1 trapezius, which is up in the shoulder; and one
2 of the theories that folks have brought up in the
3 past is that if you apply a drive stun to this
4 particular area perhaps can impact the person's
5 ability to breathe, and so we wanted to examine
6 that.

7 Q. And did you use a sonogram to do that?

8 A. An ultrasound machine, yes.

9 Q. Ultrasound. And during the drive stun
10 application was respiration continued?

11 A. Yes, it was.

12 Q. Was Exhibit 150 recently published in the Society
13 For Academic Emergency Medicine?

14 A. Yes, it was, just a couple of days ago.

15 Q. So it's a published item that you and others
16 contribute to regarding these devices, correct?

17 A. Yes.

18 MR. MALEY: Move to admit Exhibit
19 150.

20 MR. MANLEY: No objection.

21 THE COURT: Admitted.

22 BY MR. MALEY:

23 Q. All right. Doctor, let's turn now -- having
24 summarized the work that you have done on TASER
25 electronic control device in humans, let's talk a

1 bit about your work in this particular case.

2 What did you undertake in terms of review of
3 materials with the three deaths in this matter,
4 the Hyde death, Holcomb and McCullaugh?

5 A. I reviewed everything that was provided to me.

6 Q. That include investigative reports?

7 A. Again, I have a long list of things. I would
8 have to actually look at my report to give you an
9 exact.

10 Q. All right. And your report we were dealing with
11 back at Exhibit 99, you have written reports that
12 address each of these three incidents; is that
13 correct?

14 A. That's correct.

15 Q. All right. What I would like to do for
16 convenience is to direct you through each of the
17 three.

18 Let's start with Exhibit 99 Dennis Hyde,
19 which there is a June 30, 2007 segment of your
20 reports, Exhibit 99. It's about a third of the
21 way through, Exhibit 99.

22 A. Okay.

23 Q. Do you see that?

24 A. Yes.

25 Q. And is that -- does that summarize the analysis,

1 findings, and conclusions you reached with
2 respect to Mr. Hyde's death?

3 A. Yes.

4 THE COURT: Where are you at?

5 MR. MALEY: Your Honor, Exhibit
6 99, if I can.

7 THE COURT: I have 99.

8 MR. MALEY: It's a little bit
9 back, if I may.

10 BY MR. MALEY:

11 Q. Okay. June 30, 2007 report addressing Mr. Hyde,
12 first of all, in your review of the toxicology
13 and autopsy records did you find that there were
14 drugs in Mr. Hyde's system postmortem?

15 A. Yes.

16 Q. And do you recall those being methamphetamine --

17 A. Yes.

18 Q. -- and Oxycodone?

19 A. Yes.

20 Q. Are those drugs that you are familiar with as an
21 emergency medicine physician?

22 A. I am.

23 Q. Have you had experience with illicit drug
24 overdoses in your practice as an emergency room
25 physician?

1 A. Yes.

2 Q. And do you understand methamphetamine to be
3 potentially lethal?

4 A. Yes.

5 Q. And the toxicology and medical literature support
6 that?

7 A. Yes.

8 Q. And the behavior that was described in Mr. --
9 with Mr. Hyde in the basement of that women's
10 house on that morning, were there any things that
11 you noted about Mr. Hyde's behavior as reported
12 by witnesses on the scene that impacted your
13 assessment of his demise?

14 A. Well, his behavior was certainly very abnormal,
15 and I guess it would be characterized as
16 delirious by many. It was totally out of the
17 ordinary.

18 Q. And the behavior he exhibited, was it consistent
19 with methamphetamine intoxication?

20 A. It could be, yes.

21 Q. Was it consistent with excited delirium?

22 A. Certainly could be, yes.

23 Q. Was -- did you read reports of Mr. Hyde having a
24 lacerated wrist?

25 A. I remember him having a large laceration, yes.

1 Q. I'm going to show you Exhibit 3, a board, that
2 has a picture of Mr. Hyde. There has been
3 testimony in this case that this was in the
4 basement after he was initially restrained for
5 probe mode.

6 Him having been shirtless, is that something
7 that is common with excited delirium?

8 A. Various states of public nudity and undress are
9 definitely associated with, yes.

10 Q. The blood that is shown on Exhibit 3, is that
11 consistent with the lacerated wrist?

12 A. It's consistent with a large laceration, yes.

13 Q. Now, Doctor, in the Hyde matter did you, after
14 studying it, reach an opinion as to whether
15 electronic control device application to Mr. Hyde
16 contributed to his death?

17 A. Yes, I did.

18 Q. And what is your opinion?

19 A. My opinion was that it did not have anything to
20 do with his death.

21 Q. Do you draw on the scientific human research that
22 you have done in part for that?

23 A. Yes, absolutely.

24 Q. Was there evidence that you reviewed of
25 activities that Mr. Hyde was engaged in after

1 electronic control device applications?

2 A. I'm sorry. Would you say that again?

3 Q. In your review of the materials did you learn
4 that there were any activities that Mr. Hyde was
5 engaging in at a point in time after receiving
6 applications of TASER electronic control devices?

7 A. Yes.

8 Q. Talking?

9 A. Yes.

10 Q. Resisting?

11 A. Continuing to get up, yes.

12 Q. Let's turn to Mr. Holcomb. If we go back to the
13 very start of your report, Exhibit 99, August
14 17th, 2006, does this report, with a subsequent
15 June 26th, 2007 update, address Mr. Holcomb's
16 situation?

17 A. Yes.

18 Q. Did you learn -- did you undertake a similar
19 review of the medical literature, medical
20 evidence in his demise and the investigative
21 reports?

22 A. That's correct, yes.

23 Q. And did you review the toxicology results
24 postmortem?

25 A. Yes, I did.

1 Q. And did you learn that Mr. Holcomb postmortem had
2 had methamphetamine and Ecstasy in his system?

3 A. Yes, I did.

4 Q. Are those both lethal drugs?

5 A. They can be.

6 Q. And is Ecstasy something that you have
7 encountered professionally in the emergency room
8 treatment?

9 A. Yes.

10 Q. Do you have an opinion regarding Mr. Holcomb and
11 whether TASER electronic control device
12 contributed in any way to his death?

13 A. Again, he had all the same conclusions as the
14 prior case, no connection.

15 Q. Did you say no connection?

16 A. No connection.

17 Q. And do you draw on your human subject research in
18 part for that conclusion?

19 A. Yes, that's correct.

20 Q. Turning to Mr. McCullaugh's situation --

21 THE COURT: If you don't mind
22 going on, where was -- where was the one
23 you just talked about?

24 MR. MALEY: At the very start of
25 Exhibit 99, Your Honor. There were two

1 reports that address it, August 17th, 2006,
2 which is the second page of Exhibit 99
3 after his declaration --

4 THE COURT: Okay.

5 MR. MALEY: -- for Richard
6 Holcomb, and following that there is an
7 update June 26, 2007. So there are two
8 reports that address that.

9 THE COURT: Now, where is the
10 third?

11 BY MR. MALEY:

12 Q. Now, directing your attention to Mr. McCullaugh's
13 situation, in Exhibit 99 --

14 MR. MALEY: And Your Honor, I
15 would be easily able to find that for you,
16 if I can be of assistance.

17 THE COURT: Toward the back?

18 MR. MALEY: Towards the back,
19 about two-thirds of the way back of Exhibit
20 99 before the CV. There we are, right
21 there, Your Honor.

22 BY MR. MALEY:

23 Q. Have you found that, Dr. Ho?

24 A. Yes, I have.

25 Q. December 27, 2007?

1 A. Yes.

2 Q. All right. Now, is there within Exhibit 99 a
3 similar written expert report you have prepared
4 after undertaking review of the evidence
5 available in the McCullaugh matter?

6 A. Yes.

7 Q. And for reference point for McCullaugh matter as
8 you recall being a 295-pound man in the jail
9 cell?

10 A. I do.

11 Q. All right. And you undertook a similar analysis
12 as you did with the other two; is that correct?

13 A. That's correct.

14 Q. Was -- from Mr. McCullaugh's situation, we talked
15 about this a little bit before, but it is your
16 understanding from your review of the materials
17 that drive stun applications were attempted?

18 A. That's correct.

19 Q. Do you recall whether they were described by law
20 enforcement as being effective or ineffective?

21 A. Ineffective.

22 Q. Ineffective?

23 A. Ineffective, yes.

24 THE COURT: Wait a minute. You're
25 saying which?

1 THE WITNESS: I --

2 THE COURT: They were effective,
3 weren't they?

4 THE WITNESS: Well, I think what
5 happened was when they were applied, he was
6 continuing to resist and would get right
7 back up and continue fighting. That's what
8 I remember them.

9 THE COURT: Okay.

10 BY MR. MALEY:

11 Q. Mr. McCullaugh --

12 THE COURT: You mean ineffective,
13 effective that it stopped him?

14 THE WITNESS: I don't think it
15 was.

16 THE COURT: You're not saying like
17 they missed the target? You're not saying
18 that?

19 THE WITNESS: I'm not suggesting
20 they missed the target.

21 THE COURT: Because they were
22 right on the surface of the skin, wasn't
23 it?

24 THE WITNESS: Correct, I'm
25 suggesting they failed to take care of the

1 problem.

2 THE COURT: Okay. Gotcha.

3 BY MR. MALEY:

4 Q. And it was described by officers and materials
5 you reviewed?

6 A. Yes, that's correct.

7 Q. And in drive stun, does contact need to be made
8 to the human for there to be an electrical
9 circuit?

10 A. Yes, there has.

11 Q. And that's on the surface in a localized area?

12 A. Yes.

13 Q. And if someone is moving, can that make it
14 difficult to keep an effective circuit?

15 A. Very difficult sometimes, yes.

16 Q. Is that something you're familiar with as a law
17 enforcement officer --

18 A. Yes.

19 Q. -- and TASER devices?

20 A. Yes.

21 Q. And was it your understanding -- did you have any
22 understanding as to whether Mr. McCullaugh was
23 clothed or nude?

24 A. I believe he was nude at some point. I don't
25 know when it started, but he was clothed. At

1 some point he was nude.

2 Q. In terms of the basic timeline of Mr.
3 McCullaugh's situation, did that impact your
4 opinions with respect to whether TASER
5 contributed to his demise?

6 A. Yes, definitely.

7 Q. And what is your understanding of the basic
8 sequence of events from officers entering the
9 cell, attempting the device on him, restraining
10 him, nurse coming, O.C. spray being used later,
11 and then a notification being an arrest?

12 A. My memory of this was that it was quite lengthy;
13 that several minutes even up to I believe it was
14 20 or 30 minutes may have passed.

15 Q. Was -- do you have an understanding as to
16 whether -- well, was there an occasion where a
17 nurse applied -- injected some drugs into Mr.
18 McCullaugh, to your understanding?

19 A. Yes, there was.

20 Q. And do you understand that to be sometime after
21 TASER applications?

22 A. I don't remember the exact point when that
23 occurred.

24 Q. If that's what the evidence showed, would you
25 have any basis to dispute it?

- 1 A. No, I would not.
- 2 Q. Did you reach an opinion as to whether Mr.
3 McCullaugh's demise was caused by TASER
4 electronic control device applications in drive
5 stun mode?
- 6 A. I'm sorry, restate that again.
- 7 Q. Yeah. Did you reach an opinion as to whether Mr.
8 McCullaugh's demise was caused or contributed to
9 by application of TASER device in drive stun
10 mode?
- 11 A. I reached an opinion that they were not
12 connected.
- 13 Q. And was that based in part on the human research
14 that you had done?
- 15 A. Yes.
- 16 Q. Including in drive stun research?
- 17 A. Yes.
- 18 Q. Was Mr. McCullaugh engaging in behavior that was
19 consisted with excited delirium, based on your
20 professional opinion?
- 21 A. Yes.
- 22 Q. So, Doctor, in summary, your opinions in these
23 matters, the TASER device contributed or did not
24 contribute to their demise?
- 25 A. Did not contribute.

1 MR. MALEY: No further questions,
2 Doctor. Thank you. Pass the witness.

3 MR. DEFIBAUGH: No questions, Your
4 Honor.

5 THE COURT: Go ahead.

6 MR. MANLEY: Thank you, Your
7 Honor.

8 - - - -

9 CROSS-EXAMINATION

10 BY MR. MANLEY:

11 Q. Good morning, Doctor. My name is John Manley. I
12 represent the Summit County Medical Examiner in
13 this case and, Doctor, first of all, I would like
14 to know, we went over quite a few studies that
15 you have been involved in regarding testing on
16 TASER electronic control devices on human beings.

17 How many individuals would you say total
18 there were, human volunteers, throughout the
19 breathed of these studies that we have talked
20 about?

21 A. My entire research or just what was represented
22 here?

23 Q. Just what was represented here today.

24 A. I would have to count up each one.

25 Q. Can you give me a best estimate?

1 A. I would prefer to go up and count up each. I
2 mean I don't know. I would have to count each
3 one.

4 Q. Do you want to go do that? Take a minute to do
5 that then.

6 A. If that's what you would like me to do.

7 Q. I guess, if you can't give me a best estimate.

8 A. Can you give me all the numbers that we were --

9 MR. MALEY: Certainly.

10 THE WITNESS: Sorry, I didn't know
11 I need to be this accurate.

12 THE COURT: That's all right.

13 Give me a chance to get up and walk around.

14 BY MR. MANLEY:

15 A. It's about 375.

16 Q. I'm sorry, Doctor. About 375 total human
17 volunteers across the studies that Mr. Maley
18 walked you through this morning?

19 A. That's correct.

20 Q. Okay. Of those 375 human volunteers, any of
21 those on methamphetamine?

22 A. Not that they admitted to.

23 Q. Okay. Any of those on Ecstasy?

24 A. Again, not that they admitted to.

25 Q. Any of those appear to be in an acutely psychotic

1 state?

2 A. No.

3 Q. All these human volunteers appeared to you to be
4 healthy individuals?

5 A. Did they appear to me or were they actually
6 healthy?

7 Q. Did they appear to you to be healthy individuals?

8 A. They were walking, talking; yes, they appeared to
9 be healthy.

10 Q. Mr. McCullaugh, with regard to his condition you
11 indicate that his behaviors are consistent with
12 excited delirium. You're aware that he was
13 previously diagnosed with schizophrenia?

14 A. Yes, I am.

15 Q. His behaviors would also be consistent with
16 schizophrenia?

17 A. Yes.

18 Q. You testified -- strike that.

19 All of these studies were performed involving
20 the -- they had -- their core issue the effect
21 that TASER electronic control devices have under
22 a number of -- under a number of situations, is
23 that fair to say?

24 A. Sure.

25 Q. How many studies have you performed for TASER

1 would you say overall?

2 A. Studies I perform are not for TASER. They're
3 actually for my own practice. They have involved
4 TASER devices.

5 Q. And there are a lot of studies that you have done
6 that happened to involved TASER devices?

7 A. That's correct.

8 Q. How many studies have you done involving TASER
9 devices?

10 A. Again, I would have to add them up. Probably
11 somewhere in the realm of 20, 30.

12 Q. And do you get compensated for studies involving
13 TASER devices?

14 A. I personally do not get compensated for those
15 except for my employer because that's part of my
16 academic protected time.

17 Q. You seem to have a lot of time, Doctor, to
18 perform studies regarding use of TASER electronic
19 control device, is that fair to say?

20 A. That is fair to say.

21 Q. So your employer in Hennepin County, Minnesota is
22 certainly willing to do that. You don't get paid
23 for these studies, though.

24 Your speeches and presentations that you make
25 throughout the world, is there any kind of

- 1 compensation that you're paid for those?
- 2 A. I do get compensated for those, yes.
- 3 Q. And TASER compensates you for those?
- 4 A. It depends on what they're asking me to provide
- 5 through lectures.
- 6 Q. And how many lectures has TASER asked you to
- 7 provide?
- 8 A. Again, I don't know. Somewhere in the realm of
- 9 15, 20.
- 10 Q. And every time that you do that they compensate
- 11 you for your time?
- 12 A. Yes.
- 13 Q. And you're paid for your travel expenses?
- 14 A. Yes.
- 15 Q. You recently -- did you recently go to Japan to
- 16 make a presentation?
- 17 A. Last year, yes.
- 18 Q. And you have been to Germany to make a
- 19 presentation for TASER?
- 20 A. Yes.
- 21 Q. And you own TASER shares?
- 22 A. I do.
- 23 Q. How many shares do you own?
- 24 A. Approximately 4,000.
- 25 Q. So when the stock price of TASER rises, you

1 benefit?

2 A. Sure.

3 Q. Do you continue to purchase TASER shares?

4 A. I do.

5 Q. Do you trade TASER stock options?

6 A. I do not.

7 Q. You're not a forensic pathologist?

8 A. I am not.

9 Q. You're familiar with the product warnings put out
10 by TASER International corporation that discuss
11 individual susceptibilities, you have seen that
12 language, individual susceptibilities?

13 A. I have seen those, yes.

14 Q. You testified earlier that some of these study --
15 studies involving getting people exercising and
16 then successfully deploying the X26 or having
17 people consume alcohol and successfully deploying
18 the X26, that you do this to see, is it fair to
19 say, if there is something in combination that
20 you might find?

21 A. That's correct.

22 Q. So it's fair to say that you implicitly
23 understand that there are a number of factors
24 that could be in existence any one point in time?

25 A. That's correct.

1 Q. It's understandable you're unable to test for
2 methamphetamine or illicit drugs with regard to
3 how it works -- they work in combination with
4 successful deployments of X26s, correct?

5 A. In humans, yes, that's correct.

6 Q. In humans. You referenced fleetingly earlier
7 you're hoping to get the study going involving
8 the use of pigs.

9 Why do you use pigs? Why are they the
10 preferred alternative to human beings?

11 A. Well, the study is actually going and it's not
12 necessarily that pigs are the preferred
13 alternative. In fact we are using sheep at my
14 lab.

15 Q. I thought Mr. Maley on direct examination you
16 indicated you're using pigs?

17 MR. MALEY: I asked animals, John.

18 MR. MANLEY: I'm sorry.

19 BY MR. MANLEY:

20 Q. Is it fair to say that pigs are frequently used
21 in experimentation when human beings are
22 unable --

23 A. I do.

24 Q. -- to provide any data?

25 A. Pigs are one of the animal models that are used,

1 yes, but there are others.

2 Q. On the case of Mr. Hyde there has been a lot of
3 discussion about his methamphetamine ingestion.
4 You understand and you would agree, would you
5 not, Doctor, that methamphetamine -- there is no
6 uniformly lethal level of methamphetamine?

7 A. I'm aware that fatalities have been reported at
8 various levels, that's correct.

9 Q. No doubt about that. That's not quite what I'm
10 asking. There is no uniform -- there is no level
11 of methamphetamine that is uniformly lethal
12 across the population?

13 A. I believe that's correct.

14 Q. And same thing can be said for Ecstasy, no
15 uniformly lethal dosage?

16 A. Well, actually can I take that back? I believe
17 that there is a level at some point that if you
18 give a large enough level of whatever substance
19 it is you're talking about, it will be uniformly
20 lethal. I just don't know what that is.

21 Q. We had Dr. Evans in here yesterday. He is a
22 toxicologist. He testified that he did not
23 believe that there is a uniformly lethal level
24 with regard to methamphetamine or Ecstasy. Do
25 you know Dr. Evans?

- 1 A. I do not.
- 2 Q. You indicated you knew Dr. Dawes?
- 3 A. I do know Dr. Dawes.
- 4 Q. How do you know Dr. Dawes?
- 5 A. He is part of my research team.
- 6 Q. Have you and Dr. Dawes testified as experts
- 7 before on behalf of TASER?
- 8 A. Have not.
- 9 Q. What about Dr. Kroll, do you know Dr. Kroll?
- 10 A. I know Dr. Kroll.
- 11 Q. You and Dr. Kroll have testified before on behalf
- 12 of TASER?
- 13 A. I just said I have not, but I'm not sure about
- 14 Dr. Kroll.
- 15 Q. You have not testified with Dr. Kroll in this
- 16 case involving TASER International corporation?
- 17 A. Not in court, no, no. I mean I have been deposed
- 18 before. I'm not sure, but I think that's the
- 19 same.
- 20 Q. How many times have you been deposed in cases
- 21 involving TASER International corporation?
- 22 A. Two, I believe.
- 23 Q. Twice?
- 24 A. Twice.
- 25 Q. And how many times have you testified on behalf

1 of TASER International corporation?

2 A. This would be number one right here.

3 THE COURT: Is there somewhere in
4 there you mentioned another case and maybe
5 you made a report, is that what you did?

6 THE WITNESS: I have made other
7 reports. I have been deposed.

8 THE COURT: On pending cases?

9 THE WITNESS: Yes, but as far as
10 courtroom testimony --

11 THE COURT: Got you.

12 BY MR. MALEY:

13 Q. Did you provide a report in the Lomax case, Lomax
14 vs. Las Vegas Police Department?

15 A. I did, yes.

16 Q. The hypotheses that you had proposed on which you
17 base your research model has been directed
18 towards showing that the TASER electronic control
19 device is safe, is that fair so say, that's your
20 hypothesis?

21 A. That would actually be the null hypothesis.

22 Q. That would be a what?

23 A. A null hypothesis.

24 Q. Could you explain that to me?

25 A. Sure. When you approach a research project or a

1 question, you're always interested in finding out
2 what the effect is or what the effect isn't; and
3 what the effect isn't would be the null, and so
4 no, I don't think that that's -- I don't think
5 that's how we approach our projects at all.

6 Q. But is it fair to say when you say the study
7 involving the use of TASER electronic control
8 device is a null hypothesis, you're starting off
9 with the hypothesis that there would be no
10 effect?

11 A. No, I believe that's what you said. I think you
12 said that I'm starting off with the TASER being
13 safe; that would be the null hypothesis.

14 Q. What was the hypothesis then you start off with,
15 Doctor?

16 A. I'm sorry. It depends on what study you're
17 talking about. We are looking for effect in
18 various combinations, so if we are, for instance,
19 studying intoxication, we are looking for what
20 the effect is of TASER in combination with
21 alcohol.

22 Q. I presume, Doctor, is it fair to say you
23 demonstrated physiological changes in your
24 experimental --

25 THE REPORTER: Excuse me, Mr.

1 Manley.

2 BY MR. MANLEY:

3 Q. I'm sorry. Doctor, the study that you
4 referenced, have you demonstrated any physiologic
5 changes in your experimental efforts associated
6 with TASER deployment regardless of whether you
7 characterize these physiological changes as
8 quote/unquote clinically insignificant?

9 THE COURT: Excuse me a second.

10 Did you get that, Eric?

11 THE REPORTER: Yes.

12 A. If you read through our reports, what we report,
13 we generally report a clinical significance as
14 well as a statistical significance, and that's
15 how things have to go through the peer review
16 process. There is a difference between those
17 two.

18 BY MR. MANLEY:

19 Q. Okay. And you would agree in your studies that
20 the successful deployment X26 appear to cause
21 pain in the individuals?

22 A. Yes, that's correct.

23 Q. And you would agree that the successful
24 deployment of the TASER X26 appear to cause
25 immediate muscle contraction?

1 A. Again, it depends on how it's applied. Some of
2 the dry stun studies, no.

3 Q. What about the probe studies?

4 A. The probe studies in general, yes, depending on
5 where you put them, yes.

6 Q. Is it fair to say -- it seems to me, reading of
7 the some of the literature, that the area of the
8 chest near the heart is an area that users or law
9 enforcement officers are advised to try to avoid.

10 A. I'm not aware of that. I'm not aware of
11 something that says avoid the heart.

12 Q. Is there any concern that you have with regard to
13 the distance between probe location and heart?

14 A. I'm not sure I understand the question.

15 Q. Sure. Is there -- is there anything in your
16 studies that indicate that there is a greater
17 likelihood of negative physiological effect when
18 distance between the probes and the heart is
19 shorter rather than longer?

20 A. Well, in fact we are studying that right now, but
21 we have not found -- we have actually put probes
22 right over the heart in humans and have found
23 that not to be the case.

24 Q. But you're continuing to study that right now,
25 you said?

1 A. Well, it's going to be -- actually it's -- that
2 portion of the project is over. That's going to
3 be reported next month at a conference.

4 Q. Okay. So as we stand here today there is no
5 study out there that allows us to indicate that
6 distance between probe and heart is -- can be a
7 problem?

8 A. Well, there is a study that's in my lab that
9 tells me that it's not. I mean is it publicly
10 available yet? Not till next month.

11 Q. Apparently it is for right now, you just
12 indicated?

13 A. You're asking me about that.

14 Q. In the Holcomb case you presumed that the initial
15 rhythm -- you state that you presume that the
16 initial rhythm following discharge -- that there
17 wasn't an initial rhythm following discharge.

18 Do you know for certainty what that rhythm
19 would have been in Holcomb?

20 A. I can't say with certainty, no.

21 Q. You referred to George Nichols in your report on
22 Holcomb. Mr. Nichols, is it fair to say, was the
23 expert for the Plaintiffs who also opined that
24 the successful deployment of the TASER electronic
25 control device did contribute to the death of Mr.

1 Holcomb; is that correct?

2 MR. MALEY: Your Honor, I just
3 impose an objection. His report was not
4 allowed by federal court in that case.

5 THE COURT: Well, is that person
6 going to testify?

7 MR. MALEY: No, he is not a
8 witness, Your Honor.

9 MR. MANLEY: Dr. Nichols is
10 referenced in his expert report.

11 THE COURT: Dr. Nichols?

12 MR. MANLEY: Dr. Nichols. I just
13 have a couple of questions, and I will move
14 on.

15 THE COURT: I'm not quite sure why
16 you're asking him about this. Is it
17 something --

18 MR. MANLEY: He was another doctor
19 who had opined that.

20 THE COURT: But this is not this
21 doctor's opinion. You want him to say what
22 another doctor said?

23 MR. MANLEY: I will move on, Your
24 Honor.

25 THE COURT: Well, anyway.

1 MR. MANLEY: He just referenced
2 it.

3 THE COURT: If you took too
4 long -- I'm sorry.

5 MR. MANLEY: That's okay.

6 THE COURT: I was -- so the record
7 is clear, I will sustain the objection.
8 I'm just trying to give you an opportunity.

9 MR. MANLEY: Sure, I --

10 THE COURT: Some people accuse me
11 of thinking out loud. That's one problem I
12 have, I guess. I should not think at all.
13 I should just say up or down. Okay. That
14 got you off kilter anyway, didn't it?

15 MR. MANLEY: No, that's fine. I'm
16 almost done.

17 THE COURT: That's encouraging.

18 MR. MANLEY: I am concluded.

19 Thank you, Judge.

20 THE COURT: Okay. Any redirect?

21 MR. MALEY: Your Honor, briefly,
22 first move to admit Exhibit 99, his full
23 report that I admitted to move into
24 admission previously.

25 THE COURT: Okay, you have no

1 objection, I guess?

2 MR. MANLEY: No.

3 THE COURT: Okay. I mean I guess
4 at the end of this you're going to have a
5 whole -- I guess most of the stuff is all
6 going in, from what I gather?

7 MR. MALEY: That's correct, Your
8 Honor. Yes.

9 THE COURT: I'm not going to hold
10 you up on some technical thing as long as
11 you get it altogether.

12 MR. MALEY: Thanks, Judge.

13 - - - -

14 REDIRECT EXAMINATION

15 BY MR. MALEY:

16 Q. Doctor, briefly, the reports you have gone
17 through and were discussing and Mr. Manley was
18 asking a few questions about it, you mention peer
19 reviewed, and this current one is then going to
20 go to conference, the materials that you've
21 engaged in these studies go through a peer review
22 process; is that correct?

23 A. That's correct.

24 Q. And in the medical and scientific community can
25 you briefly explain what that is?

1 A. Basically what that is is it's use of -- you
2 submit your work in front of your peers, and they
3 reevaluate it for things such as scientific
4 merit, whether it's new or novel; important
5 information, whether there is bias or anything
6 like that that's come out in there; whether your
7 conclusions and your science is valid, and they
8 make recommendations for either changes or
9 suggestions or something like that.

10 And once you have made those changes to their
11 satisfaction, it is considered approved by the
12 peer review process, and it's okay for
13 publication as scientific literature.

14 Q. Is that a form of quality control within the
15 scientific community?

16 A. Yes.

17 Q. The TASER electronic control devices, do you
18 believe them, based on your research, to be safe
19 for use on humans?

20 A. So far we have not found that to be anything else
21 other than.

22 MR. MALEY: No further questions.

23 Thank you, Dr. Ho.

24 THE COURT: I have a couple of
25 questions. You know, I'm not -- my

1 question is not necessarily going to draw
2 to what your report shows, what your
3 research showed. I was curious, though, as
4 to some of the basis.

5 Now, these people that you had as
6 volunteers, at least I think you said, what
7 was it, 300, something like that, 375 I
8 think said. I mean, how do you select
9 these people?

10 THE WITNESS: You know, it's
11 actually a way that's worked out well for
12 us. We -- our research group goes to
13 instructional courses that TASER is
14 teaching, and we simply are there and say
15 anybody who would like to volunteer for one
16 of our studies is free to do so.

17 THE COURT: You mean learning how
18 to use the devices?

19 THE WITNESS: That's correct.

20 THE COURT: But I mean, don't you
21 have some questions about their medical
22 health?

23 THE WITNESS: We do make them fill
24 out a medical questionnaire which is why
25 when Mr. Manley asked me do they appear to

1 be healthy, yes, they appear to be healthy.

2 THE COURT: I'm not sure what they
3 appear to be.

4 THE WITNESS: Well, okay. That's
5 what I was getting to is I can tell you
6 what their medical history are, and some
7 are indeed not healthy.

8 THE COURT: Well, I mean would
9 you -- would you have a volunteer go
10 through it if the person has had, for
11 example, previous heart surgery?

12 THE WITNESS: We have had that,
13 yes.

14 THE COURT: Have you?

15 THE WITNESS: Yes.

16 THE COURT: And if you knew that
17 the person's prone to heart attacks at that
18 point, would you use him or her?

19 THE WITNESS: Well, the
20 interesting thing about heart attacks is
21 we're not sure who is ever prone to one. I
22 can't look --

23 THE COURT: What a good point.

24 THE WITNESS: -- predict that.

25 THE COURT: At risk?

1 THE WITNESS: At risk, yes. I
2 will admit we have excluded a couple of
3 people based on them being on blood
4 thinning medication, and we're afraid that
5 what we're going to ask them to do is make
6 them fall and start bleeding, but from the
7 standpoint of them coming --

8 THE COURT: You mean like blood
9 thinner or something like that?

10 THE WITNESS: Yes, exactly. But
11 from them coming to class, the classes that
12 they are at in general are suggested that
13 they are going to receive a TASER exposure.
14 Regardless if I'm there or not, we are
15 simply asking them for permission to study
16 their physiologic parameters before,
17 during, and after their TASER exposure.
18 I'm not controlling the exposure.

19 THE COURT: But you understand --
20 and correct me, folks, if I'm misstating
21 it, but if I understand what the medical
22 examiner came up with is that she is not
23 saying that the TASER caused the death. I
24 think all three cases she is saying it may
25 be a contributing factor. Did you get

1 that?

2 THE WITNESS: That's the way I
3 understand it.

4 THE COURT: Can't you see it's a
5 fact situation where the TASER -- discharge
6 from a TASER could be a contributing
7 factor?

8 THE WITNESS: Oh, absolutely. And
9 I have seen cases under such as that. For
10 instance, you know, I will give you one.
11 You know, somebody who has at a great
12 height, and you use a TASER on them, and
13 they fall, and they fall off a great height
14 and become injured, I would think that is
15 certainly a contributing factor.

16 But in the cases that we have
17 looked at here, these three, with regard to
18 what their physiology was and what their
19 behavior and all of this is well described
20 in the medical literature, there are
21 numerous cases that occur just like them
22 every year where TASER is not involved at
23 all; the departments don't have a TASER.

24 So if you're looking at that from
25 a, you know, a standpoint of what role does

1 TASER play in this, based on what's
2 available with the scientific literature,
3 my answer has to be it doesn't play a role
4 here.

5 THE COURT: The one that comes to
6 my mind is the one in the horse pasture.
7 Is this Holcomb?

8 MR. MANLEY: Correct.

9 MR. MALEY: Correct, Richard
10 Holcomb.

11 THE COURT: Apparently it
12 wasn't -- you remember the facts?

13 THE WITNESS: I remember most of
14 them, yes.

15 THE COURT: Apparently a fairly
16 short period of time after the probe that
17 he collapsed and I guess died, do you
18 remember that?

19 THE WITNESS: I do remember that.

20 THE COURT: And would you say if
21 he would have immediately collapsed and
22 died, the probe -- that he fell over and
23 died, would you have a different opinion
24 about that?

25 THE WITNESS: You know, I may, but

1 given, you know, you know --

2 THE COURT: I mean here it was
3 fairly clean cut in that one.

4 THE WITNESS: Well, except that of
5 any of the cases, that's one of the most
6 intriguing because that's the one where
7 there was a cardiac defibrillator on the
8 scene very quickly. I mean, it was right
9 there. They were able to put this on Mr.
10 Holcomb and figure out what rhythm he was
11 in.

12 If you apply electricity to
13 somebody, we know in medical science that
14 the rhythm will be one of two things, and
15 he was in neither, and so that actually
16 according to -- based on this defibrillator
17 that they had on scene, so that's one of
18 the pieces of the puzzle that I took into
19 account in making that report.

20 THE COURT: Maybe we haven't had
21 testimony about that yet. Have we?

22 MR. MALEY: Not in open court yet,
23 Your Honor.

24 THE WITNESS: Sorry, maybe I
25 wasn't supposed --

1 THE COURT: That's okay. But you
2 know from reading the reports. What's the
3 significance of that?

4 THE WITNESS: Well, the
5 significance of that tells me if we know
6 that application of electricity will make
7 your heart do a certain thing, and in Mr.
8 Holcomb's case application of a TASER did
9 not make his heart do that --

10 THE COURT: How do we know that?

11 THE WITNESS: Because the cardiac
12 defibrillator was there at the scene and
13 applied to him in very rapid fashion.

14 THE COURT: I thought he had
15 passed by that point.

16 THE WITNESS: Well, clinically he
17 was unconscious or unresponsive, but I
18 don't think death had been declared at that
19 point. In fact the officers were
20 attempting to resuscitate him with the
21 defibrillator.

22 THE COURT: The other question I
23 had that I thought Mr. Manley asked, I
24 mean, I assume the TASER gives your school
25 or your hospital, rather, a grant?

1 THE WITNESS: In some cases they
2 have; yes, in order to do certain research,
3 yes.

4 THE COURT: Well, they don't give
5 them a general grant, TASER?

6 THE WITNESS: No, it is per the
7 proposed project.

8 THE COURT: Okay. And how many
9 times have they done that?

10 THE WITNESS: One.

11 THE COURT: Just one. And how
12 much was that for?

13 THE WITNESS: Well, currently we
14 are in the process of using it. It is for
15 about \$100,000, and it's this
16 methamphetamine sheet that we are doing.

17 THE COURT: But you must have had
18 grants before you got that one, didn't you?

19 THE WITNESS: I have had other
20 grants from other folks other than TASER,
21 if that's what you're asking.

22 THE COURT: I'm not sure what I'm
23 asking. The portion that you just
24 testified to have nothing to do with what
25 you're talking about. I mean did they give

1 you grants for those to do those reports,
2 the ones you testified to?

3 THE WITNESS: So am I getting --
4 do I get a grant to generate a report?

5 THE COURT: In the past?

6 THE WITNESS: No, I do not.

7 THE COURT: How is the money
8 generated then?

9 THE WITNESS: When I --

10 THE COURT: There must be some
11 method that TASER pays you, the hospital,
12 somebody.

13 THE WITNESS: Yes. When I'm asked
14 to write a report on something such as this
15 case, this is done outside my employer.

16 THE COURT: I understand. I'm not
17 talking about your report as an expert --
18 I'm sorry, maybe I'm not clear -- in the
19 three instances where somebody died. I'm
20 talking about the reports that you spent an
21 hour or so testifying about.

22 THE WITNESS: Oh, okay. So how do
23 I receive --

24 THE COURT: Studies, I should use
25 the word studies.

1 THE WITNESS: So here is how my
2 practice works: I'm looked as a full-time
3 employee of my hospital group. About 60
4 percent of my time is spent seeing
5 patients, and about 20 percent of my time
6 is spent administrative. As a medical
7 director I work for some EMS services and
8 for some police departments.

9 And then 20 percent of my time is
10 in my research arena or my lab, and so all
11 of that is encompassed under my job
12 expectation of my primary employer. So my
13 employer actually says, you know, Jeff, we
14 want you to go to the lab and spend this
15 much time studying these -- studies these.

16 THE COURT: I got all that.

17 THE WITNESS: So that's how I get
18 paid everyday, if that's your question.

19 THE COURT: I assumed, maybe
20 incorrectly, that TASER pays the money to
21 the hospital or some other vehicle to help
22 set off your time, your 20 percent time
23 working on these studies.

24 THE WITNESS: There are occasions
25 where TASER will cover like, for instance,

1 if I need an extra day in the lab, they
2 will cover to -- they pay to have somebody
3 cover my shift, but as far as a general
4 grant that says we are going to do this --

5 THE COURT: Or donations, none of
6 that?

7 THE WITNESS: Well, you're giving
8 me some ideas. As of right now, no.

9 THE COURT: That's something to
10 consider. All right. But you can't say to
11 this court that you can duplicate these
12 circumstances and make a conclusion on
13 them?

14 THE WITNESS: What I can --

15 THE COURT: Like I want to
16 experiment with the gun, we take it to the
17 firing range or someplace and fire the gun
18 and we can tell something from that, right?

19 THE WITNESS: Sure. And that's
20 exactly what we have done in our studies.

21 THE COURT: But you haven't -- at
22 least if I gather right, you haven't had
23 the same circumstance with the drug use?

24 THE WITNESS: What I would say is
25 we have not had the exact same

1 circumstances described in all of these
2 cases, but we have a very large
3 preponderance of studies that are out there
4 that are all pointing in the same
5 direction, and so with that I'm pretty
6 confident in the conclusions that we're
7 coming to.

8 Do I have every answer that is out
9 there or have we answered every question
10 that's answerable? No. And that's
11 actually good because that's why I get to
12 keep going to work everyday and doing the
13 work that I do.

14 THE COURT: Find more things for
15 you to study.

16 THE WITNESS: Absolutely. But
17 we're now into this for four or five years,
18 and we have done a boatload of work and
19 come to a lot of conclusions on this.

20 THE COURT: You can probably keep
21 it going for a few more years.

22 THE WITNESS: And then some.

23 THE COURT: Okay. No more
24 questions. Anything else?

25 MR. MALEY: No, Judge, thank you.

1 MR. MANLEY: No, thank you.

2 THE COURT: Thank you for your
3 time.

4 THE WITNESS: Thank you.

5 (The witness was excused.)

6 MR. MALEY: Take a break? Would
7 this be a convenient time.

8 THE COURT: I assume we still have
9 witnesses.

10 MR. MALEY: We do, Your Honor.

11 THE COURT: Let's make 15 minutes.
12 Let's say 10 minutes to 11.

13 MR. MALEY: Thank you.

14 (A recess was had.)

15 THE COURT: We are ready to
16 proceed? Let's go.

17 MR. MALEY: Yes, Your Honor.

18 Plaintiff calls Dr. Lisa Kohler.

19 THE COURT: Doctor, raise your
20 right hand.

21 - - -

22 LISA KOHLER, M.D.

23 a Defendant, herein called on behalf of the
24 Plaintiff as on cross-examination, being first
25 duly sworn as provided by law, was examined and

1 testified as follows:

2 THE COURT: You might have a
3 different place to put that tag.

4 THE WITNESS: Well, I hang it off
5 there somewhere so I know I have got it.

6 THE COURT: Okay. State your name
7 for the record.

8 THE WITNESS: Dr. Lisa Kohler,
9 K-o-h-l-e-r.

10 THE COURT: I thought you say you
11 were calling her tomorrow? You're going --

12 MR. MANLEY: John Maley is calling
13 her right now on cross.

14 CROSS-EXAMINATION

15 BY MR. MALEY:

16 Q. Good morning, Dr. Kohler. How are you?

17 A. Good morning.

18 Q. Doctor, as the Chief Medical Examiner of Summit
19 County you oversee the entire office; is that
20 correct?

21 A. That's correct, yes.

22 Q. And while you still do somewhat of the autopsies
23 yourself, you have other deputy medical examiners
24 who do autopsies individually, correct?

25 A. That's correct, yes.

1 Q. You don't do every autopsy in every Summit County
2 death, correct?

3 A. Correct.

4 Q. And in these three matters here, Mr. Hyde,
5 Holcomb, and McCullaugh, you did not perform the
6 autopsies, correct?

7 A. That's correct.

8 Q. And you did not perform or prepare the autopsy
9 reports, correct?

10 A. Correct.

11 Q. Which is standard practice that you can't do all
12 of them, so your deputy does many of them?

13 A. That is correct, yes.

14 Q. You have other administrative obligations as
15 well, correct?

16 A. Yes.

17 Q. And you were present during the Hyde, Holcomb,
18 and McCullaugh autopsies, correct, doing the
19 autopsies themselves?

20 A. Could you restate that, please?

21 Q. Certainly. The autopsies themselves that were
22 done on Mr. Holcomb -- Hyde, Holcomb, and
23 McCullaugh, you did not perform the autopsies,
24 true?

25 A. I did not perform them, that's correct.

1 Q. And you did not make any changes to the report of
2 autopsy that was prepared by Dr. Sterbenz or
3 Dean, correct?

4 A. I did review the draft reports. I don't recall
5 at this time any changes I may have made in any
6 of those at that time.

7 Q. And sequentially we have the Hyde, Holcomb, and
8 McCullaugh death, correct?

9 A. That's correct.

10 Q. Dr. Sterbenz did the autopsy and the report on
11 the Hyde death, correct?

12 A. Yes, that's correct.

13 Q. And then Dr. Dean did the Holcomb autopsy and
14 report?

15 A. Yes.

16 Q. And then Dr. Sterbenz did the McCullaugh autopsy
17 and report; is that correct?

18 A. That's correct.

19 Q. And you didn't duplicate the work that they had
20 already done; is that correct?

21 A. That's correct.

22 Q. And you would expect Dr. Dean, for instance, in
23 the Holcomb matter to be more knowledgeable about
24 the Dean autopsy than you since she performed it,
25 correct?

- 1 A. Yes.
- 2 Q. Let's talk a little bit about your background,
3 Doctor. You're a forensic pathologist, correct?
- 4 A. That's correct.
- 5 Q. And you were board certified -- is it ten years
6 ago?
- 7 A. Yes.
- 8 Q. Did you have any training in electrical
9 engineering, correct?
- 10 A. That's correct.
- 11 Q. You are not a cardiologist?
- 12 A. Correct.
- 13 Q. You are not an electrophysiologist?
- 14 A. That's correct.
- 15 Q. You have no training in cardiology, correct?
- 16 A. Aside from basic training during medical school,
17 no, I do not.
- 18 Q. You have no training in electrophysiology,
19 correct?
- 20 A. Correct.
- 21 Q. At the time of these autopsy reports you did not
22 consider yourself to be an expert on TASER
23 electronic control devices, correct?
- 24 A. Correct.
- 25 Q. You don't consider yourself an expert on

1 electronic control devices today, correct?

2 A. That's correct.

3 Q. You're not a toxicologist?

4 A. No.

5 Q. You have never published any manuscripts,
6 articles, treatises, or chapters or volumes
7 regarding sudden death, correct?

8 A. That's correct.

9 Q. Or on the subject of electrophysiology?

10 A. Correct.

11 Q. Or on cardiology?

12 A. Correct.

13 Q. Or on electronic control devices?

14 A. That's correct.

15 Q. Or on excited delirium?

16 A. You are correct.

17 Q. And you do not know the electrical
18 characteristics of a TASER electronic control
19 device, correct?

20 A. I do not know the physics behind it or the
21 mechanisms, no.

22 Q. You don't know the amperage of an X26 TASER
23 discharge, correct?

24 A. Off the top of my head, no, although I have
25 available for review.

1 Q. And you don't know the frequency or the wave
2 forms, correct?

3 A. Again, I have literature available, but I do not
4 maintain that in my head.

5 Q. And you don't know the voltage that actually
6 enters the human being from application of an X26
7 whether in probe mode or drive stun mode,
8 correct?

9 A. That's correct.

10 Q. You agree that high voltage in and of itself is
11 not dangerous to the human body?

12 MR. MANLEY: Objection.

13 THE COURT: Wait a minute. You're
14 objecting?

15 MR. MANLEY: Yes.

16 THE COURT: Overruled. If she can
17 answer.

18 A. Could you repeat?

19 BY MR. MANLEY:

20 Q. I will rephrase it. And actually, Doctor, to be
21 fair, you don't know whether high voltage in and
22 of it itself is dangerous to the human body?

23 A. I'm not familiar enough with the engineering
24 aspects of it to state definitively.

25 Q. And you don't have a scientific, medical, or

1 engineering basis to say one way or the other,
2 correct?

3 A. Correct.

4 Q. You don't have any scientific, medical, or
5 engineering evidence that TASER electronic
6 control devices increase body temperature in
7 humans, correct?

8 A. I believe there are case reports out there
9 indicating that, but I can't cite a particular
10 one.

11 Q. And in your deposition you were unable to provide
12 any information in response to that question,
13 correct?

14 A. That's correct, yes.

15 Q. And you don't hold the opinion that application
16 of the TASER device to Mr. Hyde caused him to
17 have a high fever, correct?

18 A. No, I have not stated that.

19 Q. Now, in connection with Mr. Holcomb's demise your
20 office issued a press release, correct?

21 A. Correct, that's true.

22 Q. The press release had some language that was a
23 little bit different than the autopsy report, do
24 you agree?

25 A. Yes. It's geared toward educating the public as

1 to what our findings are, so we tend to go away
2 from the medical terminology and use lay terms.

3 Q. And that press release stated, quote, In summary
4 Mr. Holcomb died from the effects of
5 methamphetamine and Ecstasy which sensitized his
6 heart to the effects of the TASER equipment that
7 was required to subdue him.

8 Do you recall that statement?

9 A. That's sounds familiar, yes.

10 Q. And you don't hold yourself out as an expert on
11 drugs and they're sensitizing or desensitizing
12 the heart, correct?

13 A. On that specific aspect, no, I do not.

14 Q. And you have never researched methamphetamine and
15 Ecstasy and their effect of sensitizing or
16 desensitizing the heart to the effects of
17 electronic control devices, correct?

18 A. Although I have not done individual research, my
19 basic medical training allows me to understand
20 that the use of intoxicating drugs such as
21 stimulants like you have mentioned can have
22 negative cardiac effects.

23 Q. And are you aware that there has been studies
24 that show that cocaine, for instance, can
25 actually increase the fibrillation threshold in

1 hearts?

2 A. That study has a flaw, as I see it, in that the
3 anesthesia used is Isoflurane which is known to
4 have cardioprotective effects. Because of that
5 issue I can't say whether there is truly a
6 protective effect based on that study.

7 Q. You have never published on the subject of
8 methamphetamine or Ecstasy and the sensitizing of
9 those drugs on the heart, correct?

10 A. No, I have not.

11 Q. Now, you don't hold yourself out as an expert in
12 any specialty dealing with the physiologic
13 effects of a TASER deployment on the human body,
14 correct?

15 A. Could you restate that, please?

16 Q. Yes. You do not hold yourself out and as an
17 expert in any specialty dealing with the
18 physiologic effects of the TASER deployment on
19 the human body, correct?

20 A. Correct.

21 Q. And prior to issuance of the Holcomb report, for
22 instance, you yourself did not conduct any
23 independent medical research, correct?

24 A. We do not conduct independent medical research
25 prior to certifying causes of death as a manner

1 of practice.

2 Q. And so no independent research occurred before
3 the Hyde, Holcomb, or McCullaugh autopsy reports,
4 correct?

5 A. Nor with any other cases that we certify, that's
6 correct.

7 Q. Now, you remember, do you not, that you were
8 contacted after one of these three deaths by a
9 physician from Johns Hopkins Hospital --

10 A. Yes.

11 Q. -- Dr. Hugh Calkins, an electrophysiologist?

12 A. Yes. I don't recall whether he contacted me or
13 if it was recommended that I contact him. Yes,
14 there was a conversation.

15 Q. All right. And you did not consult with any
16 cardiologist or electrophysiologist on any of the
17 three autopsy reports in these matters, correct?

18 A. A formal consultation, no.

19 Q. Now, let's talk a little bit about the drugs on
20 board in several of these matters. You're aware
21 that methamphetamine is a stimulant?

22 A. Yes.

23 Q. You understand it to be potentially fatal?

24 A. Yes.

25 Q. And you understand that the consequences of

1 methamphetamine on a human can include irregular
2 heartbeat?

3 A. Yes.

4 Q. Increased blood pressure?

5 A. Yes.

6 Q. Convulsions?

7 A. Possibly, yes.

8 Q. Death?

9 A. Yes.

10 Q. You're aware that there have been numerous deaths
11 in this country from methamphetamine?

12 A. Yes.

13 Q. And you're aware there has been numerous deaths
14 in this country from Ecstasy?

15 A. Yes, there are numerous drug deaths, and there is
16 numerous intoxications at varying level of drug
17 concentration.

18 Q. And you're aware that among healthy teenagers
19 there have been deaths from Ecstasy and
20 methamphetamine?

21 A. Yes, there are.

22 Q. Now, your office has actually rendered a number
23 of autopsy reports independent of any TASER
24 applications involving methamphetamine,
25 correct --

1 A. That's correct.

2 Q. -- where methamphetamine has been found on its
3 own to be the cause of death, correct?

4 A. Yes. When there are no other intervening
5 factors, it has been cited as the cause of death.

6 Q. And your office has rendered similar reports
7 finding Ecstasy to be the cause of death in other
8 matters that did not involve TASER applications,
9 correct?

10 A. Yes, there have been other situations.

11 Q. And cocaine as well?

12 A. Correct, yes.

13 Q. Now, you believe that Mr. Holcomb's drug use was
14 within the hours preceding his death, correct?

15 A. That's correct, yes.

16 Q. You believe that to be true with Mr. Hyde as
17 well, correct?

18 A. Yes.

19 Q. Oxycodone can be fatal, correct?

20 A. Yes, it can be.

21 Q. And that was in Mr. Hyde as well?

22 A. Yes. It was at a level that is not uniformly
23 lethal, and it is below the levels that are
24 normally reported as lethal when combined with
25 other drugs, but it can be.

1 Q. And the Oxycodone was combined with
2 methamphetamine in Mr. Hyde's situation, correct?

3 A. Yes.

4 Q. Let's talk a little bit about excited delirium.
5 We have had a little bit of testimony on that
6 from Dr. Evans and Dr. Hoffman. That's a term
7 that you know to be an accepted forensic
8 pathology term, correct?

9 A. I wouldn't say it's accepted. There is some
10 dispute over it, but there are many forensic
11 pathologists that do opine that excited delirium
12 exists.

13 Q. And you recall in your deposition testimony I
14 asked you that question and you agreed that it
15 was an accepted forensic pathology term?

16 A. Yes.

17 Q. It's interchangeable from your perspective with
18 the term drug psychosis?

19 A. Yes.

20 Q. And you believe Mr. Holcomb and Mr. Hyde were in
21 drug-induced psychosis, correct?

22 A. Yes, I would agree with that.

23 Q. And you chose -- your office chose not to use the
24 phrase excited delirium because there are other
25 causes of excited delirium beyond just drug

1 intoxication, correct?

2 A. Yes. We are trying to be more specific as to the
3 etiology of the state of the individual.

4 Q. So excited delirium could be a larger umbrella,
5 within it there is drug psychosis?

6 A. Yes.

7 Q. And there is psychiatric illness?

8 A. Yes.

9 Q. The drug-induced psychosis that Mr. Hyde and Mr.
10 Holcomb were suffering from -- was not caused in
11 your opinion by an electronic control device,
12 correct?

13 A. That's correct, yes.

14 Q. You believe that to have been caused, for
15 instance, in Mr. Holcomb by the methamphetamine
16 and the Ecstasy?

17 A. Yes.

18 Q. The National Association of Medical Examiners,
19 you're a member of that organization?

20 A. Yes, I am.

21 Q. And they have a guide on manner of death
22 classification, correct?

23 A. They do.

24 Q. And that guide states that deaths due to the
25 acute effects of a drug or poison such as alcohol

1 poisoning, excited delirium from acute cocaine
2 intoxication, have traditionally been classified
3 as accident, do you agree?

4 A. When dealing with a situation where there are no
5 additional forces, yes, that would be
6 traditionally considered an accident; however,
7 they are not exclusive, and it's not an exclusive
8 diagnosis if there are additional forces applied
9 to that person that would go beyond the drug
10 intoxication, such as if the person were shot
11 with a weapon; then you could go on to homicide
12 because the homicidal manner of death takes
13 greater precedence over the accidental manner of
14 death.

15 Q. But for acute illicit drug intoxication,
16 traditionally if that is the cause of death by
17 itself, that's been determined by the NAME
18 guidelines, N-A-M-E, to be accident, correct?

19 A. Generally that would be true.

20 Q. All right. You recall a cocaine death that
21 occurred during police restraint involving an
22 individual named Solomon Dandridge?

23 A. Yes, I'm familiar with the name.

24 Q. Your office determined that cause of death to be
25 excited delirium from cocaine intoxication,

1 correct?

2 A. That does sound correct, yes.

3 Q. Now, if someone is dying of excited delirium,
4 defibrillation is usually ineffective, correct?

5 A. Usually but not always.

6 Q. And a defibrillator -- Dr. Ho was mentioning
7 this. Defibrillators in the last 20, 25 years
8 have become common, for instance, implantable
9 defibrillators, correct?

10 A. Yes.

11 Q. Persons that are prone to arrhythmias can have a
12 small defibrillator implant in their chest; is
13 that correct?

14 A. Yes, that's true.

15 Q. And you're aware that, for instance, Dr. Kroll,
16 one of our expert witnesses in this case, has
17 spent many years designing those devices,
18 correct?

19 A. That's my understanding, yes.

20 Q. And there are also now, and probably have them in
21 this building, AEDs, which are automatic -- or
22 Automated Electronic Defibrillators; is that
23 correct?

24 A. Yes, that's correct.

25 Q. And these are devices that are in office

1 buildings or sports fields can be used on someone
2 who might need that resuscitation, correct?

3 A. That is correct, yes.

4 Q. All right. And those defibrillators when they're
5 applied to a human, the computer with the leads
6 tracks the rhythm of the person's heart, correct?

7 A. Yes, they do.

8 Q. Now, the literature on excited delirium holds
9 that and concludes that defibrillation is usually
10 ineffective in excited delirium deaths, do you
11 agree?

12 A. It is usually, but not always.

13 Q. And you don't have any basis to dispute that
14 literature yourself, correct?

15 A. No, I do not.

16 Q. Now let's turn for a minute to Mr. Vince Di Maio.
17 Are you familiar with Dr. Di Maio?

18 A. Yes, I am.

19 Q. And do you know him to be a forensic pathologist
20 in Texas?

21 A. Yes, he is.

22 Q. You have met him previously?

23 A. Yes, I have.

24 Q. All right. You understand him to be well
25 regarded in the forensic pathology field?

1 A. I know that he is well known. I do not know how
2 he is regarded in the field.

3 Q. I asked you that question in your deposition, and
4 you agreed he was well regarded in the pathology
5 field.

6 A. At the time I answered at the depo, yes. Since
7 that time I have had further discussions with
8 individuals that would call that into question.

9 Q. Your office has several of his texts, correct?

10 A. Yes, we do.

11 Q. And your office does not spend taxpayer moneys on
12 unreliable texts, correct?

13 A. We would not have; however, I don't know which of
14 those would have been bought with taxpayer money
15 and which of those are parts of private
16 collections. Many of those books were purchased
17 by my predecessor with his own funds, so I can't
18 say if taxpayer money was spent.

19 Q. Dr. Di Maio has authored several texts in the
20 area of forensic pathology, correct?

21 A. Yes.

22 Q. Including texts on excited delirium?

23 A. Yes.

24 Q. Your office consulted Dr. Di Maio's text in
25 conjunction with doing the Holcomb autopsy

1 report, correct?

2 A. I believe that was correct, yes.

3 Q. And that was done for support for the report,
4 correct?

5 A. That was done to get additional information on
6 the report.

7 Q. Doctor, let's turn to some other questions.

8 You're aware that sometimes people die in police
9 custody and it's not because of anything that
10 anyone did?

11 A. That is correct.

12 Q. In-custody deaths have occurred throughout
13 history, correct?

14 A. Yes.

15 Q. Long before electronic control devices powered by
16 two three-volt photocells, correct?

17 A. That is correct.

18 Q. Do you know Dr. Warner Spitz?

19 A. Yes.

20 Q. He is a forensic pathologist --

21 A. Yes.

22 Q. -- in Detroit?

23 A. That is correct.

24 Q. All right. He -- is he a reputable forensic
25 pathologist?

1 A. I know he is well known. I can't say
2 specifically what his reputation would be.

3 Q. Do you have his text in your office?

4 A. Yes, I do.

5 Q. What is it entitled?

6 A. Medical/Legal Investigations of Death. He is the
7 editor.

8 Q. Doctor, are you aware that just last week we were
9 for the first time provided from your office
10 through your counsel with the medical examiner's
11 file in the McCullaugh death?

12 A. I don't know when that was actually produced.

13 Q. I will represent to you as an officer of the
14 court that it came last week, and Mr. Manley can
15 correct me if I am wrong on that.

16 Are you familiar with that file?

17 A. I'm familiar with that exists in our office, yes.

18 Q. And your office has record retention requirements
19 to contain and maintain those files, correct?

20 A. Yes, we do.

21 Q. And that file contains a report from Dr. Warner
22 Spitz, correct, regarding the McCullaugh death?

23 A. That I do not know for certain. I have not
24 looked through it thoroughly at this time.

25 Q. And Dr. Spitz's report concluded that

1 Dr. McCullaugh died of natural causes unrelated
2 to the police, correct?

3 A. That may be true. I have not read his report
4 recently to recall the content.

5 Q. Your office hasn't changed the McCullaugh autopsy
6 report or death certificate at any point in time,
7 has it?

8 A. No, it has not.

9 Q. Doctor, let's talk a little bit about preparing
10 autopsy reports. Do you agree that it is
11 important to use medical and scientific
12 principles in preparing autopsy reports?

13 A. Yes, it is.

14 Q. Let's turn to the subject of blood, bleeding, and
15 a term called exsanguination.

16 A. Yes.

17 Q. Is that the medical terminology for bleeding to
18 death?

19 A. Yes, that is correct.

20 Q. Now, Mr. Hyde had a significant lacerated wrist,
21 correct?

22 A. Yes, he did have a laceration.

23 Q. Has your office concluded before in an autopsy
24 report that a decedent bled to death?

25 A. Yes. In situations where we can demonstrate that

1 there is a significant loss of blood and in the
2 autopsy we see that the person is pale and there
3 is very little blood remaining in the body, based
4 on the circumstances in our findings we can rule
5 exsanguination, and we have ruled that way.

6 Q. Humans can die from bleeding to death, you agree?

7 A. Yes.

8 Q. And humans can die from the radial artery being
9 severed, correct?

10 A. They can, although it's a long process, requires
11 some persistence.

12 Q. Have you ever seen a severed radial artery?

13 A. Yes.

14 Q. And have you ever reached conclusions in autopsy
15 report that the decedent attempted suicide?

16 A. Yes.

17 Q. And have you ever found the decedent has
18 committed suicide?

19 A. Yes.

20 Q. On many occasions?

21 A. Yes.

22 Q. And you have reached that conclusion where
23 someone severed their radial artery, correct?

24 A. I believe so, yes.

25 Q. Now, when someone bleeds to death, you don't know

1 what the physiologic mechanism of death is,
2 correct?

3 A. I don't know the exact mechanism of that person;
4 however, in the process of bleeding to death as
5 you lose a significant quantity of your blood, it
6 causes the heart to fail.

7 Q. And you don't know whether the person would go
8 into ventricular fibrillation, for instance,
9 correct?

10 A. That's correct.

11 Q. You don't know whether they go into pulseless
12 electrical activity, correct?

13 A. That is correct.

14 Q. Now, in the Hyde case you don't know whether
15 there was any attempt made by your office to
16 measure the amount of blood loss, correct?

17 A. I know that we did not measure the amount of
18 blood loss because there is no scientific method
19 to do so.

20 Q. And you did not do anything to determine the
21 amount of blood that was lost yourself, correct?

22 A. As I just stated, correct.

23 Q. You do know -- do you know whether Mr. Hyde had
24 prior to death lost a significant volume of
25 blood?

1 A. He had lost blood. I do not know what your
2 quantification is for significant. There was
3 blood loss, and it was referenced on the death
4 certificate.

5 Q. Doctor, have you seen Exhibit 3 during the trial,
6 the photographs of Dennis Hyde from the basement?

7 A. Yes, I saw that at the time of the trial; and I
8 have also seen it previously in our office.

9 Q. All right. Did you see that prior to the autopsy
10 report?

11 A. Yes.

12 Q. Would you agree with me that there is significant
13 blood on Mr. Hyde's body in that picture?

14 A. I would say that there is blood staining on the
15 body. I'm not going to quantify it as
16 significant.

17 Q. You're not an expert on how much time would be
18 required for someone to exsanguinate from
19 transection of the radial artery, correct?

20 A. It would depend upon so many factors it's not
21 possible to state how long that would take in a
22 particular person.

23 Q. But you're not an expert on that subject,
24 correct?

25 A. That's correct.

1 Q. Nor is Dr. Sterbenz, correct?

2 A. No.

3 Q. Correct statement?

4 A. Correct.

5 Q. Would you agree that a grayish, ashy color to the
6 skin indicates that a person is losing blood?

7 A. Quite possibly, yes.

8 Q. By the way, Doctor, your office has not concluded
9 in any cases that metabolic acidosis was the
10 cause of death, correct?

11 A. That would be a mechanism of death rather than a
12 cause of death, so it would be unlikely to
13 certify a death as such.

14 Q. And you have been unable to make a diagnosis of
15 metabolic acidosis postmortem, correct?

16 A. Correct.

17 Q. Not just in these three cases but in any case,
18 correct?

19 A. Correct.

20 Q. Now, let's talk a little bit about mental health.
21 Can a person's prior mental health history be
22 relevant in determining cause of death?

23 A. Yes, it can.

24 Q. And if a person has a previous psychiatric
25 history, they can be predisposed to certain

1 conditions that might affect their health,
2 correct?

3 A. Yes, that is correct.

4 Q. Including cardiac dysrhythmias, correct?

5 A. Correct.

6 Q. Let's talk a little bit about ventricular
7 fibrillation. In the electrocution --
8 electrocution cases -- well, first of all, you
9 have had some cases in your office involving
10 electrocution, correct?

11 A. Yes, high voltage and low voltage.

12 Q. And the electrocution cases to your understanding
13 that when someone is electrocuted and dies, they
14 usually go into ventricular fibrillation,
15 correct?

16 A. That is a frequent happening, yes, yes.

17 Q. You don't know how long after ventricular
18 fibrillation someone would die, correct?

19 A. That's correct.

20 Q. You don't know whether it would be seconds,
21 hours, or days, correct?

22 A. Correct.

23 Q. You don't have the background, education,
24 training, or experience to render an opinion on
25 that subject, do you?

1 A. It would depend upon the circumstances to
2 determine how long that happened. I can't say in
3 general about that -- lengths of time.

4 Q. And in your deposition previously you told me
5 under oath that you didn't have the background,
6 education, training, or experience to render an
7 opinion on that subject, correct?

8 A. I could not render it as a general basis, that is
9 correct.

10 Q. Do you agree that electricity does not build up
11 in the body, correct?

12 A. Yes.

13 Q. Now, you were present when Dr. Dean testified
14 back in the Holcomb matter, correct, in
15 deposition?

16 A. At which --

17 Q. Couple years back, the first deposition?

18 A. At the first deposition in the wrongful death
19 suit, no, I was not present.

20 Q. You're aware that Dr. Dean testified in the
21 Holcomb matter that --

22 MR. MANLEY: Is this the first
23 deposition?

24 MR. MALEY: Yes, I apologize.

25 BY MR. MALEY:

1 Q. And I think you're correct. I apologize. I
2 misspoke. In the -- let me move forward.

3 You don't have any scientific, medical, or
4 engineering proof to support an opinion that
5 application of a TASER device contributed to Mr.
6 Holcomb's death, correct?

7 A. Proof, no. But I do have scientific evidence and
8 information that would suggest that it may have,
9 yes.

10 Q. With respect to Mr. Hyde, your office offers the
11 opinion that the TASER contributed to his death;
12 is that correct?

13 A. Correct.

14 Q. You don't know how the TASER device possibly
15 contributed to Mr. Hyde's death, correct?

16 A. I don't know the exact mechanism that was
17 elicited by the TASER weapon; however, I do have
18 multiple ways in which the TASER could have
19 contributed, and we do believe that it did.

20 Q. But you have testified previously under oath, did
21 you not, that you did not know how the TASER
22 contributed to his death, correct?

23 A. I do not know the exact mechanism, that is
24 correct.

25 Q. And you cannot state within reasonable degree of

1 medical certainty how a TASER device might have
2 contributed to Mr. Hyde's death?

3 A. Again, I can't say specifically which mechanism
4 was involved.

5 Q. Now, time in terms of an even such as a TASER
6 application occurring sometime prior to another
7 event occurring, in your assessment of these
8 three deaths the time or temporal proximity is a
9 factor that you rely on, correct?

10 A. Yes, we have evaluated time factor.

11 Q. And beyond temporal proximity there is no other
12 medical or engineering or scientific evidence of
13 an electronic control device causing Mr. Hyde's
14 death that you relied upon, correct?

15 A. The temporal association is a large portion;
16 however, there are basic forensic tenants that we
17 have relied upon to show that they can have an
18 effect.

19 Q. Direct your attention, if you could, Doctor, to
20 your deposition of July 18th, 2006 that's in that
21 notebook, if you could turn to page 89 and 90.

22 A. Yes.

23 Q. And I asked you at the bottom of page 89, The
24 Hyde autopsy report concluded that TASER
25 electronic control device caused Mr. Hyde's

1 death?

2 And you said: Yes, it was in combination
3 with the acute methamphetamine intoxication.

4 My next question: Again, was the temporal
5 sequence of TASER application followed within
6 some short period of time of Mr. Hyde going into
7 arrest that led your office to conclude the
8 electronic control device was the cause of death
9 in the Hyde situation?

10 Answer: That is a portion of this decision.

11 The next question I ask you: And there is no
12 other medical, engineering, or scientific
13 evidence of electronic control device causing Mr.
14 Hyde's death, correct? What was your answer?

15 A. I said correct. There --

16 Q. Thank you.

17 A. -- at the time I did not have the reports in
18 front of me to refer to; however, we did have, as
19 I mentioned, basic forensic tenants that we used
20 to make our correlation.

21 Q. And did I read that testimony and question
22 accurately?

23 A. You did, yes.

24 Q. Now, you're aware that Dr. Dean has testified
25 that she could not say whether to any degree of

1 reasonable certainty the TASER device contributed
2 to Mr. Holcomb's death to as little as
3 .0000000001 percent. Are you aware of that?

4 MR. MANLEY: I'm going to object.

5 Your Honor, the figure didn't -- counsel is
6 suggesting that the figure came from Ms.
7 Dean. It was a figure suggested by Mr.
8 Maley at deposition.

9 MR. MALEY: Which she admitted to,
10 Your Honor. You're going to hear that from
11 her under oath. That will be tied up.

12 THE COURT: Overruled.

13 A. That was a statement because we cannot know the
14 exact numerical contribution of an individual
15 disease process or injury towards death. We do
16 not quantify it.

17 BY MR. MALEY:

18 Q. And you don't have any basis to dispute
19 Dr. Dean's testimony about the .00000001 percent
20 correct?

21 A. As I just stated, that is correct.

22 Q. Thank you, Doctor. Let's talk about the subject
23 of options that are available to medical
24 examiners and coroners in issuing cause and
25 manner of death determinations.

1 One option for the medical examiner is to
2 state undetermined, correct?

3 A. That is one of the available, yes.

4 Q. And you have had occasions where you have been
5 unable to determine cause of death, correct?

6 A. That's a different question, but yes, there have
7 been times that I have determined the cause of
8 death would be listed as undetermined.

9 Q. And that's been true, you have had some adult
10 cases where you have listed cause of death to be
11 undetermined, correct?

12 A. I believe that's true, yes.

13 Q. And the NAME guide on manner of death states that
14 undetermined is less than 50 percent certainty.

15 Do you have any basis to dispute that?

16 A. No. Cause of death is cause of death.

17 Q. Now, the medical examiner has an obligation to
18 correct autopsy reports that need altered,
19 correct?

20 A. That is true, yes.

21 Q. Or to change or edit them, do you agree?

22 A. Yes.

23 Q. And the National Association of Medical Examiners
24 in its guidelines states the cases are seldom, if
25 ever, truly closed because the conclusions may be

1 changed based on new, relevant, and material
2 information. Do you agree?

3 A. That is true. We are held to that.

4 Q. You agree with Mr. Hyde's situation, for
5 instance, let's talk about his restraint from law
6 enforcement and the use of an electronic control
7 device.

8 You agree that the sooner Mr. Hyde received
9 medical care there was a better prognosis for
10 him, correct?

11 A. That would be true, yes.

12 Q. He was in a serious health condition when
13 officers arrived?

14 A. Yes.

15 Q. Lacerated artery, correct?

16 A. Correct.

17 Q. In delirium?

18 A. Yes.

19 Q. He was at risk of death, do you agree?

20 A. I would agree, yes.

21 Q. And the sooner medical care can be provided to
22 him, the better the potential outcome, do you
23 agree?

24 A. I would agree, yes.

25 Q. And that's because he was in a state of

1 intoxication as well, correct?

2 A. Yes, he was.

3 Q. And bleeding, correct?

4 A. That's correct.

5 Q. You're aware that the -- and you have heard the
6 testimony in open court that law enforcement
7 could not get to him to restrain him initially
8 because of behavior?

9 A. Yes, that's my understanding.

10 Q. And you don't have any basis to dispute that, do
11 you?

12 A. No, I do not.

13 Q. And you don't have any basis to dispute the
14 paramedic testimony that they could not get to
15 him until he was restrained?

16 A. I have nothing to dispute that.

17 Q. Now, Dr. Dean has testified under oath in
18 deposition that she could not say that but for
19 the TASER device Mr. Holcomb would have lived.
20 Do you have any basis to dispute that testimony?

21 A. It's a situation that did not exist; therefore,
22 we cannot assess it, so we accept the statement
23 as it stands.

24 Q. And you have not been -- in previous testimony
25 disputed that testimony she made?

1 A. I don't dispute it, no.

2 MR. MALEY: Those are all
3 questions I have. Thank you.

4 THE COURT: Okay. You can step
5 down.

6 MS. RUBRIGHT: Your Honor, I have
7 a few questions.

8 THE COURT: You do?

9 MS. RUBRIGHT: Yes.

10 - - - -

11 CROSS-EXAMINATION

12 BY MS. RUBRIGHT:

13 Q. Dr. Kohler, would you agree not all consecutive
14 events are related to one another; is that
15 correct?

16 A. That's correct, yes.

17 Q. You indicated in your depositions that were taken
18 in the Holcomb case that you did -- you became
19 familiar with the Canadian research study on
20 electronic control devices; is that right?

21 A. Yes.

22 Q. And you became aware of that study after you
23 issued the report of autopsy on the Hyde case?

24 A. Yes, that would be correct.

25 Q. And in that Canadian research study you

1 acknowledge that there was no definitive evidence
2 that exists that implicates a causal relationship
3 between electronic control devices and death,
4 isn't that correct?

5 A. That is true, it does not state a causal
6 relationship.

7 Q. And you conceded also not only that fact but also
8 you conceded that you had no scientific or
9 engineering evidence to contradict that study
10 isn't that correct?

11 A. At that time that, yes.

12 Q. And that was after the Hyde death?

13 A. Yes.

14 Q. You also have stated that you do not know whether
15 or not methamphetamine desensitizes the heart to
16 the effects of an electronic control device,
17 isn't that correct?

18 A. I don't recall that statement particularly -- of
19 using the terminology desensitize versus
20 sensitized correctly.

21 Q. Okay. If you want to go to your deposition from
22 2006, page 65, the question was asked: You don't
23 hold yourself out as an expert on drugs and their
24 sensitizing or desensitizing the heart, do you?

25 A. Right. That is a correct reading.

1 Q. And your answer was that --

2 A. Correct.

3 Q. -- that you do not know whether or not it
4 sensitizes or desensitizes?

5 A. No, I do not hold myself out as an expert. That
6 was the question. The answer to that was, No, I
7 do not hold myself out an expert as to whether or
8 not the drugs sensitize or desensitize the heart.

9 Q. You also stated that Dr. Sterbenz is the one who
10 actually did the autopsy and wrote the report of
11 autopsy; is that correct?

12 A. With regards to which case?

13 Q. With the Hyde case.

14 A. With the Hyde case, that is correct, yes.

15 Q. And if we look at the report of autopsy, it's
16 your signature that's on that report of autopsy;
17 is that right?

18 A. Both of ours appear. My signature appears on
19 most of the autopsies coming out of the office to
20 indicate that I have reviewed the findings and
21 I'm in agreement with those that have been
22 reported by my pathologists.

23 Q. So when your signature is on any report of
24 autopsy, you agree with everything that's in that
25 report of autopsy, is that a fair statement?

1 A. That is correct.

2 Q. And when you issued your report of autopsy on the
3 Hyde death, you had in your possession all of the
4 interviews that were done of the police officers;
5 is that correct?

6 A. We had numerous interviews. I would have to
7 assume that they are all of the interviews. I
8 don't know that there are -- if I had everything
9 or not.

10 Q. Did you review the interviews of the police
11 officers who took the witness stand in this case,
12 Officer Horvath?

13 A. Yes, I have reviewed multiple witness statements
14 regarding that. I can't say exactly which ones I
15 have at this time frame.

16 Q. My question to you is did you re -- did you
17 review the police officers who testified in front
18 of you the other day, Officer Yurick, Officer
19 Horvath, Officer Ross, did you read your reports
20 before you issued the report of autopsy?

21 A. I don't know at what point I read them. I have
22 read them numerous times throughout this period
23 since 2005 until today's date. I can't say when
24 they were read, at what time in that time
25 continuum.

1 Q. So are you telling me you might not have even
2 read them before you issued the report of
3 autopsy?

4 A. Word for word I probably did not read them. They
5 were reviewed. They were also reviewed by my
6 physician, Dr. Sterbenz. He read through them
7 very thoroughly and would have discussed those
8 issues with me at that time.

9 Q. You heard Paramedic Deihl testify in this
10 courtroom; is that correct?

11 A. Yes, I did.

12 Q. And you know that EMS was on scene during part of
13 this struggle with Mr. Hyde; isn't that right?

14 A. That is correct, yes.

15 Q. Didn't you feel that what the paramedics had to
16 say about the condition of Mr. Hyde was very
17 important?

18 A. Yes. And we reviewed their EMS run sheets. We
19 obtained that information.

20 Q. You had an EMS run sheet, and you reviewed that
21 before the report of autopsy?

22 A. Yes, it was reviewed.

23 Q. You also had the individual interviews of
24 Paramedic Dort and Paramedic Deihl, did you not?

25 A. I believe there was a summation of what they

1 said. I don't recall right now if there were
2 individuals off of each, specific one for Deihl
3 and Dort, I don't recall.

4 Q. Do you know whether or not you reviewed the
5 interviews of Paramedic Deihl and Paramedic Dort
6 before you rendered your report of autopsy on
7 Dennis Hyde?

8 A. I don't have independent recall of every specific
9 step I went on that case or any other case at
10 this time. The information was there. I have
11 seen it since. I cannot say specifically at what
12 point in time I reviewed those. The information
13 was reviewed prior to the determination as to the
14 cause and manner of death.

15 Q. But you can't say whether you ever reviewed those
16 statements and interviews from those paramedics
17 before you signed them, you signed the report of
18 autopsy?

19 MR. MANLEY: Objection, asked and
20 answered.

21 THE COURT: Overrule. I don't
22 know if she did answer.

23 A. I don't have direct recollection of when exactly
24 in the time continuum those --

25 THE COURT: All she is asking you

1 is before.

2 THE WITNESS: As I said, Judge, no
3 disrespect, I don't recall when in the
4 continuum. I read those specific reports.
5 I reviewed very many reports over time, and
6 I have reviewed numerous reports,
7 especially recently, and I can't say
8 complete -- with complete certainty that I
9 looked at each word of those reports prior
10 to the certification. Dr. Sterbenz was the
11 primary person on those, and he would have
12 done the in-depth review of the
13 investigations.

14 I would have looked at pieces of
15 it during that time frame. I can't say
16 with certainty I looked at the entire
17 report at that time.

18 BY MS. RUBRIGHT:

19 Q. So your answer is no, you can't tell me whether
20 you did or didn't before you --

21 MR. MANLEY: Objection --

22 Q. -- reported the autopsy on Hyde?

23 MR. MANLEY: -- asked and
24 answered.

25 THE COURT: I think that is what

1 she is saying. Overruled. You want to
2 answer that question.

3 A. My answer is as it stands.

4 BY MS. RUBRIGHT:

5 Q. You made this statement in your deposition that
6 based on your experience Hyde died because of a
7 combination of drugs, electrical pulse
8 incapacitation, and agitated behavior.

9 Can you tell me what experience you ever had
10 in the use of an electronic control device before
11 the report of autopsy was issued on Dennis Hyde?

12 A. We have had one case come through our office
13 prior to that that we had direct experience with
14 in which an individual was exposed to a TASER
15 weapon. However, in that situation the
16 individual was not controlled and was
17 subsequently shot by the police.

18 We had that opportunity to be aware of
19 information and reviewed extensive information on
20 TASER that was provided to me by the company as
21 well by the Akron Police Department.

22 Q. So you're telling me you used the shooting case
23 as your prior experience to render an opinion on
24 the Hyde death?

25 A. No. You asked if my experience was in electronic

1 control device usage. That was case that we had
2 had previously. As I stated before, we also had
3 received extensive information on electronic
4 control devices at the time we were making the
5 decisions.

6 So it would be the training as a forensic
7 pathologist, my experience, as in my caseload, as
8 well as the caseloads of my colleagues, in seeing
9 how a weapon inflicts forces on an individual and
10 cause physiologic stress on that individual which
11 coupled with other physiologic stress --

12 Q. Doctor, I'm not asking you --

13 MR. MANLEY: Your Honor, if she
14 could let the witness finish the answer to
15 the question.

16 THE COURT: I think it's a simple
17 question.

18 MS. RUBRIGHT: I think so, too.

19 THE COURT: Why don't you repeat
20 the question.

21 BY MS. RUBRIGHT:

22 Q. Dr. Kohler, can you tell me what case was your
23 prior experience with electronic control devices
24 before Dennis Hyde? Just tell me the name.

25 A. Right now I don't recall the name. It was

1 mentioned in one of the previous deposition, I
2 believe Mr. Johnson -- I don't recall the name or
3 the case number. It has been mentioned in
4 previous depositions.

5 THE COURT: You're talking about
6 the shooting case?

7 THE WITNESS: Yes.

8 BY MS. RUBRIGHT:

9 Q. And in this shooting case you never deliberated
10 about whether or not an electronic control device
11 contributed to the death, because he was shot;
12 isn't that right?

13 A. In that situation we had another force that
14 exceeded that of the TASER. He was shot, and the
15 gunshot wound was the cause of death, yes.

16 Q. You made the statement that you have no idea
17 whether physical exertion increases the hazards
18 of methamphetamine use; is that correct?

19 A. I don't recall that statement specifically, but
20 if you have that in the deposition, I would agree
21 to that.

22 Q. Well, I'm representing to you that is it in your
23 '06 deposition at page 96, if you want to review
24 that.

25 THE COURT: What volume is that

1 one in?

2 MS. RUBRIGHT: Your Honor, we
3 didn't provide the deposition, I don't
4 believe. We may have another copy.

5 THE COURT: I thought you were
6 going to tell me some black lined --

7 MR. MALEY: If you would like, we
8 have them, Your Honor. Those are the
9 depositions, if you would like them.

10 THE COURT: They have been filed
11 or not filed.

12 MR. MALEY: They have not been
13 filed.

14 THE COURT: I guess I shouldn't
15 look at them. The reference you had,
16 before I forget to ask you, Ms. Ambrose
17 Rubright --

18 MS. RUBRIGHT: Yes, Your Honor.

19 THE COURT: You asked the medical
20 examiner about a Canadian report?

21 MS. RUBRIGHT: Yes.

22 THE COURT: And were you also then
23 -- cross-examined her about the deposition?
24 Those are questions you had in the
25 deposition?

1 MS. RUBRIGHT: That's correct,
2 Your Honor.

3 MR. MALEY: And, Your Honor, I
4 stand corrected. All those depositions are
5 of record. They were filed with our
6 summary judgment motions.

7 THE COURT: Oh. Maybe I can have
8 the book back then.

9 MR. MANLEY: You want to give him
10 the book back?

11 THE COURT: What page?

12 MS. RUBRIGHT: Your Honor, I'm
13 going to withdraw instead of take the time.

14 THE COURT: Where was the Canadian
15 questions?

16 MS. RUBRIGHT: It was a question
17 about methamphetamine use.

18 THE COURT: No, no. What page?

19 MS. RUBRIGHT: It was on page 96.
20 I'm withdrawing the question, Your Honor.
21 I'm just withdrawing the question.

22 THE COURT: I'm sorry. I'm
23 talking about something that was asked and
24 answered about five minutes ago.

25 MS. RUBRIGHT: You mean the

1 Canadian research study?

2 THE COURT: Yes.

3 MS. RUBRIGHT: It was in the 2006
4 deposition pages 62 through 65.

5 THE COURT: That was my -- thank
6 you very much.

7 MS. RUBRIGHT: I'm sorry, Your
8 Honor. I misunderstood what you were
9 asking.

10 THE COURT: You don't have to
11 apologize. I may not have stated it
12 clearly. Go ahead, please.

13 BY MS. RUBRIGHT:

14 Q. Dr. Kohler, did you interview a single witness
15 that was on scene at the death of Dennis Hyde
16 before you issued your report of autopsy?

17 A. I personally did not.

18 Q. Do you know whether anyone in your office
19 interviewed any police officer, paramedic, or
20 anyone at the scene of Dennis Hyde's death?

21 A. My investigator would have communicated with
22 individuals there. During the course of autopsy
23 Dr. Sterbenz had the opportunity to speak with
24 some of the police officers at that time. I
25 don't know which of those may have been present

1 at the time.

2 Q. Do you know what officers were at the autopsy of
3 Dennis Hyde?

4 A. The one that comes to mind is Detective Juanita
5 Elton.

6 Q. And was Detective Elton at the scene of Dennis
7 Hyde, was she one of the officers responding to
8 that?

9 A. No, she would not have been responding. I do not
10 know whether she was present at the scene or not.

11 Q. You made the statement that it does not matter to
12 you when Hyde died, is that correct, the time of
13 his death really doesn't matter to you?

14 A. The exact time of death is really unknown at this
15 point and the --

16 THE COURT: She asked you a
17 different question.

18 THE WITNESS: I'm leading to it,
19 Your Honor.

20 THE COURT: Okay.

21 BY MS. RUBRIGHT:

22 Q. It would go a lot quicker if you just answer the
23 question.

24 MR. MANLEY: Your Honor.

25 THE COURT: Are we picking on the

1 witness?

2 MR. MANLEY: I'm not going to make
3 any characterizations, Judge, but if Ms.
4 Ambrose would please just let the witness
5 finish the answer.

6 THE COURT: I think Ms. Ambrose is
7 correct, I mean --

8 THE WITNESS: Could you repeat the
9 question? I'm sorry.

10 BY MS. RUBRIGHT:

11 Q. Yes. You made the statement that it does not
12 matter to you when Dennis Hyde died; is that
13 correct?

14 A. The exact moment of his death is not needed to be
15 known in the situation. The fact that he died
16 soon after the TASER is what we were looking for.

17 Q. So let's talk about soon. How did you come up
18 with the time lapse between a TASER use and his
19 death if you don't care what time he died?

20 A. We don't know the exact time lapse in this
21 situation. The whole situation was quite
22 chaotic. We have times recorded on dispatch
23 records. We have times that are recorded by the
24 TASER weapons. These were synchronized for
25 mathematics efforts; however, I can't say that

1 they were specifically reliable.

2 We have paramedics giving times based on
3 looking at their watch, and again I don't know
4 how well coordinated those times are. So over a
5 period of minutes there could be quite a
6 variability in those recorded events, so I can't
7 say specifically how long passed from the time of
8 the last tasing applications to the time that the
9 individual died.

10 Q. You were --

11 THE COURT: Don't you typically
12 accept the time frames that law enforcement
13 people present to you?

14 THE WITNESS: We accept them as
15 being --

16 THE COURT: It sounds like a
17 questioning.

18 THE WITNESS: It's a general
19 acceptance. It gives us an approximation.
20 We can't say specifically that those times
21 are correct.

22 And, Your Honor, if you recall
23 some of the other testimony we have had,
24 they have stated that there are differences
25 between what was recorded on the TASER

1 probes and what was the actual time, and
2 there have been -- had to be some
3 corrections there.

4 THE COURT: But you certainly have
5 outside limits, don't you?

6 THE WITNESS: We have an
7 approximation. It's an approximation at
8 best. I can't say a particular time period
9 at 1:02 point whatever a particular event
10 definitively happened. I have gotten an
11 approximation of minutes. I can't say
12 exactly how many.

13 THE COURT: But I have heard some
14 of the experts for the Plaintiff that if it
15 was contemporaneous with the death, that
16 certainly was a contributing cause. They
17 can see that.

18 THE WITNESS: I believe it is
19 contemporaneous. I believe the time frame
20 we are talking about here is one of concern
21 and a period of minutes following the
22 application --

23 THE COURT: That's one of the
24 disputes. What if it was 15 minutes went
25 by from the last discharge of the TASER to

1 the person's death?

2 THE WITNESS: I would still
3 consider that as being a short time period.

4 THE COURT: 15 minutes?

5 THE WITNESS: Yes.

6 THE COURT: But is it a
7 significant time frame, whether it be 15 or
8 five or one second?

9 THE WITNESS: It's something that
10 needs to be looked at in the overall
11 appearance of the case. I can't say
12 specifically. If we have a situation where
13 someone is tasered, they fall and strike
14 their head and get a head injury, it may
15 take days for them to die.

16 So you have to look at the time
17 frame and its approximation and look at the
18 victim situation that we have here, and we
19 have -- I believe there are a period of
20 minutes. I can't say specifically two
21 minutes, five minutes, seven minutes. I do
22 believe there is a period of minutes in
23 each of these cases.

24 THE COURT: Go ahead.

25 BY MS. RUBRIGHT:

1 Q. Dr. Kohler, you didn't do anything or ask any
2 questions or investigate what the time lapse was,
3 isn't that correct?

4 A. We reviewed the records, so we did do that
5 portion. We did investigate by reviewing the
6 records that they provided to us.

7 Q. You were provided with a computer printout from
8 the Tasers, the actual guns that were used or the
9 weapons that were used, from the three officers,
10 you had the computer printout; is that right?

11 A. Yes, we do.

12 Q. Did you assume that those were accurate times?

13 A. We assumed that those are the times provided to
14 us that the weapon was discharged.

15 Q. Did you assume that those were contemporaneous
16 times, that it was not off at all?

17 A. The times recorded on those discharges are
18 different on the weapon as opposed to what's on
19 the printout. We have the time that was recorded
20 on the individual weapons. We don't know how
21 they were synchronized, and there was a corrected
22 time that one of the police officers created to
23 say how -- when that happened --

24 Q. Was that provided to you?

25 A. That was provided.

1 Q. Well, that officer testified, and his name is
2 Steve Prough, and you sat here and heard him,
3 didn't you?

4 A. Yes.

5 Q. And Officer Prough stated that at 6:12:46 the
6 last TASER probe cycle ended, that was the last
7 cycle.

8 A. Yes.

9 Q. Do you recall hearing that?

10 A. I do recall that.

11 Q. And do you recall hearing Paramedic Deihl state
12 that at 6:25 Dennis Hyde was alive and he had 28
13 respirations because he counted them and he
14 looked at his watch?

15 A. He looked at his watch. I don't know how that
16 compares exactly to the dispatch times, but yes,
17 those statements were stated and I agree.

18 Q. I didn't ask you about the dispatch times. You
19 heard the testimony of those two witnesses,
20 didn't you?

21 A. Yes, I did.

22 Q. Okay. So if we just do simple subtraction, 6:12
23 and 6:25, that's 13 minutes, isn't it, Dr.
24 Kohler?

25 A. It would be 13 minutes assuming they are

1 synchronized time.

2 Q. That Paramedic Deihl's watch is synchronized?

3 A. That his watch is recording time at the same rate
4 that the TASER is, and I can't say that for
5 certain. It is a period of minutes.

6 Q. Let's say it's off two minutes.

7 A. Which direction?

8 Q. That it's actually less.

9 A. Okay.

10 Q. Are you telling me that that time lapse does not
11 matter to your opinion?

12 A. In this situation it is still a period of
13 minutes, and I believe that it does not play a
14 major role in how we would determine these cases.

15 MS. RUBRIGHT: I have no other
16 questions, Dr. Kohler.

17 THE COURT: Okay. Anything else?

18 MR. MALEY: No, Your Honor,
19 nothing of this witness.

20 THE COURT: You can step down.
21 Thank you, Dr. Kohler.

22 (The witness was excused.)

23 MR. MALEY: Like to call
24 Dr. Sterbenz.

25 THE COURT: Okay. Doctor, just

1 raise your right hand, first of all.

2 - - -

3 GEORGE STERBENZ, M.D.

4 a witness, herein called on behalf of the
5 Plaintiff as on cross-examination, being first
6 duly sworn as provided by law, was examined and
7 testified as follows:

8 THE COURT: Have a seat. And just
9 for the court reporter state your full
10 name.

11 THE WITNESS: My name is
12 Dr. George Sterbenz.

13 THE COURT: Spell your last name,
14 sir.

15 THE WITNESS: S-t-e-r-b-e-n-z.

16 CROSS-EXAMINATION

17 BY MR. MALEY:

18 Q. Good morning, Doctor. How are you today?

19 A. Good morning.

20 THE COURT: And you call him as on
21 cross-examination?

22 MR. MALEY: That's correct, Your
23 Honor.

24 BY MR. MALEY:

25 Q. Doctor, we have had occasion to spend some time

1 together in depositions, correct?

2 A. Yes.

3 Q. And you have given sworn testimony on prior
4 occasions?

5 A. Yes.

6 Q. You do not hold yourself out as an expert on
7 TASER electronic control devices, correct?

8 A. Correct.

9 Q. You are not able to answer questions regarding
10 characteristics of TASER electronic control
11 devices, correct?

12 A. Correct.

13 Q. You do not hold yourself out as an expert on
14 electronic control devices regardless of
15 manufacturer, correct?

16 A. That's correct.

17 Q. And you're not an expert on the TASER brand X26
18 device, correct?

19 A. Correct.

20 Q. And you don't hold yourself out as an expert on
21 the effects of a TASER electronic control device
22 on the human body, correct?

23 A. Can you be more specific?

24 Q. Is there anything about the question you didn't
25 understand?

1 A. You state that I'm not an expert on the effects
2 of the TASER device on the human body?

3 Q. That's correct. I asked you that question in
4 your deposition, correct?

5 A. That's essentially correct.

6 Q. And you answered no, that you were not holding
7 yourself out as an expert on the effects of a
8 TASER electronic control device on the human
9 body, correct?

10 A. Correct.

11 Q. Now, you're not an expert on the effects, if any,
12 of a TASER electronic control device on a human's
13 arterial blood gases, correct?

14 A. That's correct.

15 Q. Or on human's pulmonary function, correct?

16 A. That's correct.

17 Q. Or on the effect of such a device on a human's
18 cardiac system, correct?

19 A. That's correct.

20 Q. You're not qualified to render an opinion whether
21 a TASER device can raise a human being's body
22 temperature, correct?

23 A. I don't believe that is correct.

24 Q. But when I took your deposition under oath, you
25 agreed with that statement, did you not?

1 A. I think there is experimental data that indicates
2 that body temperature can be raised by the
3 effects of a TASER device.

4 Q. You didn't cite any of that to me in your
5 deposition, when I asked you, did you?

6 THE COURT: Why don't you read to
7 him what your question was and what he
8 answered.

9 MR. MALEY: I will do that, Your
10 Honor.

11 BY MR. MALEY:

12 Q. I direct your attention to your first deposition,
13 Dr. Sterbenz, page 126. This is the deposition
14 of June 1st, 2007. Have you found page 126?

15 A. Do --

16 Q. I apologize. You may have the wrong notebook.
17 That wouldn't match up, would it.

18 Have you found page 126?

19 A. Yes.

20 Q. I asked the question, line eight: Are you
21 qualified to render an opinion as to whether a
22 TASER device can raise a human body's
23 temperature. What's the answer you gave at line
24 11?

25 A. I stated, I believe the answer would be no.

1 Q. Next I asked you: Have you ever researched the
2 subject of whether a TASER device can elevate
3 body temperature on a human? What was your
4 answer?

5 A. I stated, No. I said, I had not performed
6 research.

7 Q. And I asked you next: Have you ever -- and you
8 have never read a peer-reviewed scholarly
9 publication that addresses the subject of whether
10 TASER application can elevate the human body
11 temperature?

12 And you said, I don't recall at this time,
13 correct?

14 A. That's what I answered, yes.

15 Q. Now, you agree that forensic pathologists should
16 not speculate?

17 A. Yes.

18 Q. You agree that forensic pathologists should base
19 their opinions on generally accepted medical
20 principles?

21 A. Yes.

22 Q. And forensic pathologists should base their
23 opinions on generally accepted scientific
24 principles?

25 A. Yes.

1 Q. Doctor, let's talk a little bit about drugs. You
2 would agree that someone who is intoxicated with
3 illicit drugs that it would be appropriate for
4 them to receive prompt medical attention?

5 A. Yes.

6 Q. You agree there is no safe level of
7 methamphetamine intoxication in human beings?

8 A. Yes.

9 Q. And if someone ingests the drug methamphetamine,
10 they should receive prompt medical attention, you
11 agree?

12 A. I agree that an individual is deserving of
13 medical attention if they're using a drug
14 illicitly, yes.

15 Q. Now, in Mr. Hyde's situation in the basement you
16 would agree that his behavior was agitated?

17 A. No, I do not agree.

18 Q. Do you agree that he was in need of medical
19 attention?

20 A. You're asking me questions regarding --

21 Q. Mr. Hyde?

22 A. -- Mr. Hyde regarding issues that I was not
23 present for. I can agree that others did
24 interpret his behavior as such. Obviously I
25 cannot give firsthand knowledge that Mr. Hyde was

1 agitated or -- or specifically to Mr. Hyde's
2 mental state at the time in the basement on the
3 day of his death because I was not there.

4 Q. And you have -- you have to rely on the firsthand
5 witnesses, the officers, and the paramedics on
6 the scene, correct, for that information?

7 A. That is correct.

8 Q. And you have no reason to state that their
9 observations were inaccurate, correct?

10 A. Your question is I have no reason to state their
11 observations are inaccurate?

12 Q. That's true.

13 A. No, I cannot objectively confirm the accuracy of
14 their statements.

15 Q. You have no reason to believe that their
16 statements are inaccurate?

17 A. And my answer is I have -- I am not able to
18 confirm the accuracy of their statements. I
19 cannot objectively confirm the accuracy of their
20 statements. I don't have anatomic evidence at
21 the time of autopsy that confirms the accuracy of
22 their statements. I don't believe them to be
23 specifically deceiving or lying in their
24 statements.

25 THE COURT: You're getting a

1 pretty fancy answer, but don't you --
2 didn't you rely on their statements and
3 other information in making your report?

4 THE WITNESS: I absolutely do. I
5 do have to rely on their statements in
6 making my report.

7 THE COURT: But you give me the
8 impression like, well, maybe I shouldn't be
9 relying on them.

10 THE WITNESS: Well, very good
11 point. I -- I do take into consideration
12 their statements; however, there is two
13 issues. Do I -- can I confirm that their
14 statements are indeed absolutely accurate?
15 I can't objectively confirm that, but, of
16 course, I do consider their statements, and
17 I have no reason to believe that their
18 observations are intentionally inaccurate.

19 THE COURT: Well, don't you do
20 that everyday, every time you perform an
21 autopsy?

22 THE WITNESS: Every time, every
23 time. I am given observation statements
24 that are in part -- that individuals I
25 trust are believing they're telling me what

1 they believe to be true. Some of that
2 information is indeed true, and some is not
3 exactly accurate, and I try to judge to
4 what extent I can objectively confirm their
5 statements with my autopsy observations.

6 I attempt to look at the physical
7 findings and to see to what extent I can
8 objectively corroborate their statements
9 and then make a decision as to what extent
10 I need to interpret their statements versus
11 the physical findings and formulate a final
12 decision.

13 BY MR. MALEY:

14 Q. Doctor, could you please turn to page 191 of your
15 prior sworn testimony?

16 A. Yes.

17 Q. Line 19, All right. And do you understand, we
18 can quarrel with what words to use, that Mr. Hyde
19 on occasion in the basement was acting wildly?

20 Would you please read to the court the answer
21 you gave under oath?

22 A. Yes. I understand that he was described as such,
23 and I have no reason to believe that it is
24 inaccurate.

25 Q. Thank you. Now, in the basement with Mr. Hyde

1 you agree he could not be given medical attention
2 until he was restrained?

3 A. I believe that is -- I do not know with certainty
4 that he could not be given medical treatment
5 until he was restrained. If indeed what is
6 described as him having violent behavior and
7 agitated behavior, that would be consistent.

8 Q. Doctor, at page 191 of your deposition I asked
9 you the question, line 25: Could Mr. Hyde be
10 given medical attention prior to being captured,
11 controlled, and/or restrained?

12 At line three of page 192 what was your
13 answer?

14 A. Of course not.

15 Q. Thank you. Now, the TASER device was used by law
16 enforcement to bring Mr. Hyde under control,
17 correct?

18 A. Correct.

19 Q. Let's talk about excited delirium for a moment.
20 You acknowledge and are aware that the National
21 Association of Medical Examiners has a
22 recognition of that entity of excited delirium,
23 correct?

24 A. Yes.

25 Q. Now, let's talk about blood and exsanguination.

1 Humans can die from exsanguination, agree?

2 A. Yes.

3 Q. And someone who has a transection of the radial
4 artery can potentially result in significant loss
5 of blood, exsanguination, and death, correct?

6 A. Exsanguination of the major artery can result in
7 death, yes.

8 Q. Including the radial artery, correct?

9 A. Including the radial artery.

10 Q. And where is the radial artery?

11 A. It is an artery in the arm.

12 Q. Including the wrist?

13 A. Yes.

14 Q. Now, with respect to Mr. Hyde you did not
15 specifically attempt to measure the volume of
16 blood present at the scene in that home, correct?

17 A. That is correct, I did not specifically extract
18 the blood from his body and measure the volume.

19 Q. Now, let's talk about TASER involvement in this
20 matter. It is your opinion that TASER is not an
21 independent cause of death in Mr. Hyde's demise,
22 true?

23 A. True.

24 Q. Let's talk about timing. You don't know how long
25 it was from the last TASER application until Mr.

1 Hyde went into arrest, correct?

2 A. There is -- that is correct, yes.

3 Q. And clearly the period of time has some
4 significance, agree?

5 A. Yes.

6 Q. And you don't have an opinion as to what the
7 timeline is to determine whether a TASER is
8 contributory or not contributory to a human's
9 demise, true?

10 A. I'm sorry, could you repeat that question?

11 Q. Certainly. You do not have an opinion as to the
12 time duration at which you can say either that
13 the TASER was causative contributory or was not
14 causative contributory, that is the time period
15 from last application until a human's arrest?

16 A. Your Honor, there is no time period from which an
17 inflicted force that results in an injury and
18 then later brings about or contributes to death
19 would not be considered part of that mechanism of
20 death.

21 So if the TASER, for example, resulted in the
22 individual falling down striking their head and
23 receiving a head injury, that later results or
24 contributes to their death 30 years later, that
25 application of the TASER would still forensically

1 be considered even 30 years later. Certainly
2 that is an acceptable principle.

3 Q. So 30 years later you would still list TASER as a
4 contributory cause of death, is that your
5 testimony?

6 A. My testimony is if an injury is inflicted, and it
7 does contribute to death, interval from the time
8 of the infliction to the time of death is
9 irrelevant.

10 Q. I direct your attention to page 150 of your prior
11 sworn testimony, Doctor. Please tell me when you
12 found page 150.

13 A. I will. Yes.

14 Q. Line nine: All right. Do you have an opinion as
15 you sit here today as to the time duration of
16 which you can say either that the TASER probably
17 was causative or the TASER was probably not
18 causative from the last TASER application on a
19 human until arrest?

20 You asked, On a human?

21 I said, Yes.

22 What was your answer at line 17?

23 A. I have not rendered an opinion, and I don't have
24 one currently.

25 Q. Thank you. You don't have an opinion as to

1 whether Mr. Hyde went into arrest within five
2 seconds of the last TASER application, correct?

3 A. That's correct.

4 Q. Or 60 seconds, correct?

5 A. That's correct.

6 Q. Or five minutes, correct?

7 A. That's correct.

8 Q. But you agree that the longer the period of time
9 from the last application of an electronic
10 control device until arrest that it's less likely
11 that the device contributed to death?

12 A. Once again, there is no definite period of time
13 which would negate the inflicted effect of any
14 force if that force can be shown to have a
15 continuous sequence of events.

16 Q. Could you please turn to page 194 of your prior
17 sworn testimony, Doctor?

18 Have you found it?

19 A. Yes.

20 Q. Line nine, question: Do you agree with the
21 statement that the longer the period of time from
22 the last application until arrest the less likely
23 it is that TASER contributed to death?

24 What did you answer under oath in your
25 deposition?

- 1 A. I said, I would conform to that.
- 2 Q. And you said it twice, right, I would conform to
3 that, I would conform to that, correct? Did I
4 read that properly?
- 5 A. Yes.
- 6 Q. Now let's talk about percentage contribution.
7 You're not able to state to a reasonable degree
8 of medical certainty what percentage contribution
9 an electrical pulse incapacitation contributed to
10 Mr. Hyde's death, correct?
- 11 A. That's correct.
- 12 Q. And same for Mr. McCullaugh, correct?
- 13 A. That's correct.
- 14 Q. You will only contend there is some contribution,
15 the bare minimum, some fraction of a percent,
16 correct?
- 17 A. At the very least a fraction of a percent.
- 18 Q. You don't contend that the TASER device was
19 greater than 25 percent of the cause of Mr.
20 Hyde's death or Mr. McCullaugh's death, true?
- 21 A. I haven't rendered an opinion as to what
22 percentage that a TASER device contributed to Mr.
23 Hyde's or Mr. McCullaugh's death.
- 24 Q. And so my statement would be true?
- 25 A. Your statement is I agree that it's not 25

1 percent.

2 Q. No. You do not contend that the TASER
3 contribution was greater than 25 percent, agreed?

4 A. I don't contend that it's any percentage. I
5 haven't rendered an opinion as to any percentage
6 of contribution.

7 Q. So you don't --

8 A. So it could be 25 percent, but I'm not saying
9 that it is definitely 25 percent.

10 Q. And that's my questions of you, Doctor, and I can
11 move through this quickly. I asked you these
12 questions at your deposition, and you answered
13 them. If you can answer again, I would
14 appreciate it.

15 Let's take ten percent, you don't contend
16 that TASER contributed to ten percent
17 contribution in Mr. Hyde's death, correct?

18 A. Not ten percent. I haven't made an opinion as to
19 any percent contribution.

20 THE COURT: I think he has
21 answered.

22 MR. MALEY: All right. It's --

23 THE COURT: It's noon. I don't
24 know how much longer you're going to be.
25 Maybe we could break for lunch or not.

1 You're going to ask some questions?

2 MS. RUBRIGHT: I will.

3 MR. MALEY: We probably have 15
4 minutes.

5 THE COURT: The previous
6 admonition I gave you applies. Let me just
7 refer you -- have you shown him the
8 stipulated facts, by the way?

9 MR. MANLEY: Uh-huh.

10 THE COURT: The doctor has seen
11 them?

12 MR. MANLEY: Uh-huh.

13 THE COURT: We will be recessed
14 until 1 o'clock.

15 - - - -

16 (A luncheon recess was had.)

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